

ANALYSES OF BUSINESS CYCLES

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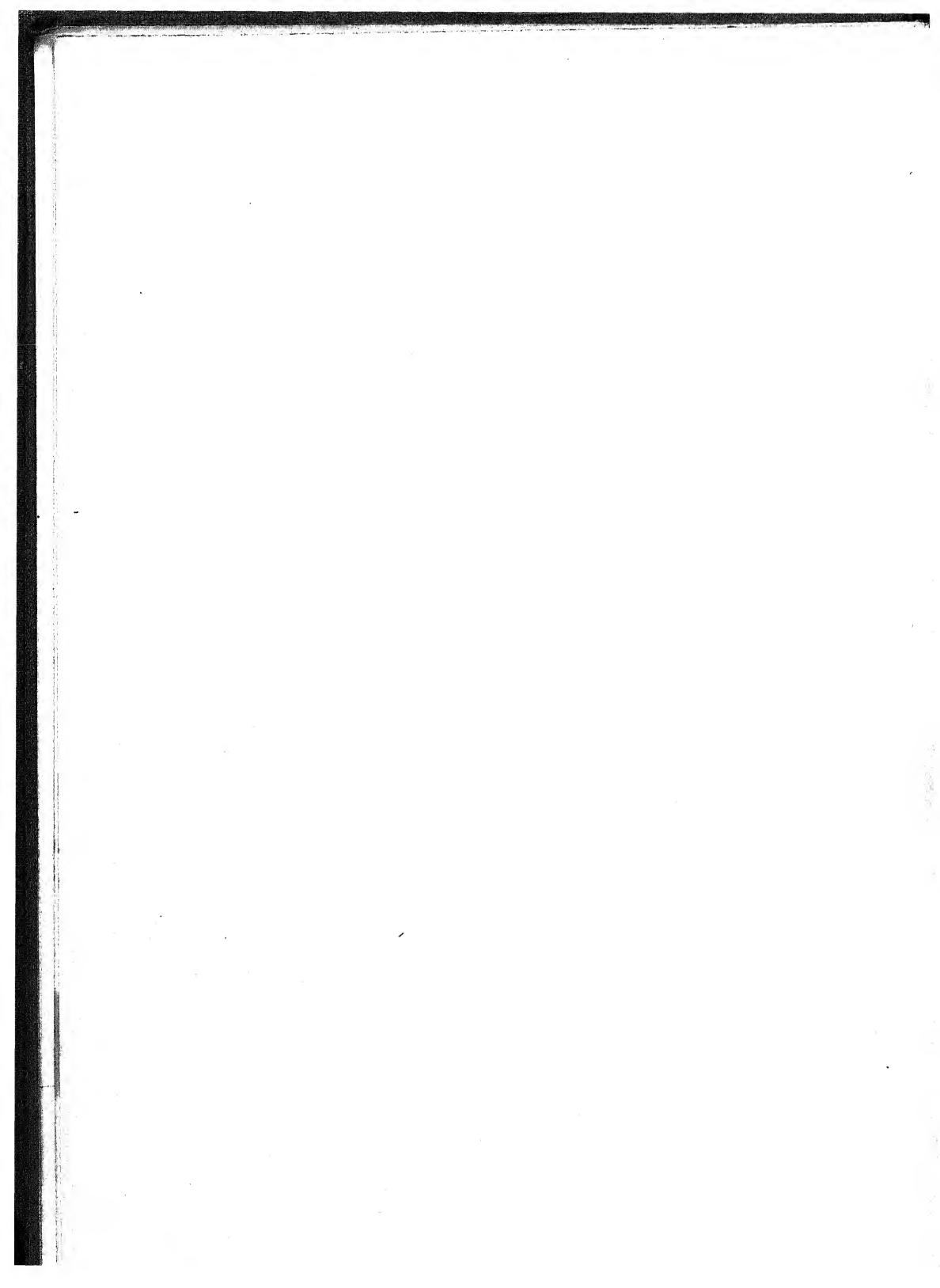
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To My Wife

LOUISE BROWNING ADAMS



Preface

Twelve years ago I finished the manuscript of my *Economics of Business Cycles* which was published in January, 1925, by the McGraw-Hill Book Company. To my gratification and pleasant surprise the book was favorably received by many students and teachers of the problems of business fluctuations. In addition to having a satisfactory "trade" sale, the volume has been in constant demand as a text and reference book in many colleges and universities for the past twelve years.

During the past three years both my publishers and I have received many requests (principally from teachers) that the volume be revised to cover the history, statistics, and analyses of all cyclical fluctuations since 1924. Much water has passed over the dam of our economic system in these twelve eventful years. Partly because of additional knowledge of great economic changes in the past two decades, and partly because of revisions in some of my own conclusions with reference to the nature and causes of business cycles, I found it easier to write a new book on the subject than to revise my old one. In several places in this new book, *Analyses of Business Cycles*, however, I have used material, in a revised form, taken from *Economics of Business Cycles*.

I do not dare presume that this new book contains *the last word* on business cycles. It does, however, contain *my latest words*, if not my last, on this complicated and intriguing subject. My hope is that all serious students of the great economic and political problems resulting from business cycles will receive the book charitably, if not

favorably. Regardless of how the book is received, if it results—even in a small way—in a more intelligent understanding of the various public problems connected with cyclical fluctuations, I shall feel that the efforts I expended in writing it were not wasted.

In writing this volume, I had the advantages of several friendly criticisms of the contents of *Economics of Business Cycles* by students of the problem. I am duly grateful to all these critics for their valuable aid, and I wish especially to express my appreciation for the constructive and helpful suggestions made by Professor Walter Spahr. All the analyses and conclusions contained in the book, however, are mine, and no one else should be held responsible for any of their faults or weaknesses.

I am also indebted to several other friends who aided me in the preparation of the manuscript. Dr. Findley Weaver of the Bureau of Business Research of the University of Oklahoma kindly prepared all the statistical tables and charts of the book and checked the uses I made of them. Both Mr. William H. Butterfield and Mr. Savoie Lottinville rendered much aid in making the manuscript more readable. Last, but not least, I am grateful to Miss Mildred Coston and to Mrs. Georgia M. Byron for their careful and pains-taking work in deciphering and typing the manuscript.

ARTHUR B. ADAMS.

NORMAN, OKLAHOMA,
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Contents

	PAGE
PREFACE	vii
CHAPTER I	
NATURE OF OUR ECONOMIC SYSTEM	
1. Basic Features of the System	1
2. Coordinating and Conflicting Forces	7
3. Meaning of Trends of Business.	12
CHAPTER II	
INDUSTRIAL AND BUSINESS STABILITY	
1. Production, Sale and Distribution of the Net Product.	18
2. Features of a Stabilized Industrial System.	25
3. Principal Upsetting and Stabilizing Forces.	31
CHAPTER III	
TYPES OF BUSINESS CYCLES	
1. Nature of Cyclical Fluctuations	38
2. Phases of Typical Business Cycles	45
a. Inflation-deflation Cycle	45
b. Overinvestment-underconsumption Cycle.	50
3. Business Cycles of the Past	53
CHAPTER IV	
QUANTITATIVE MEASUREMENTS OF FLUCTUATIONS	
1. Uses of Statistical Data in Measurements	60
2. Sources and Nature of Available Statistics.	68
3. Statistical Analyses of Business Movements	76
CHAPTER V	
ORIGIN AND CUMULATION OF BOOMS	
1. Industrial Forces That Generate Booms.	86
2. Other Boom-generating Forces.	93
3. Cumulative Development of Booms.	101
CHAPTER VI	
REASONS WHY BOOMS END IN CRASHES	
1. How Booms Upset the Economic Balance.	108
2. Forces Which Bring Booms to an End	115
3. Characteristics of Boom Crashes	122

CONTENTS

CHAPTER	PAGE
CHAPTER VII NONBOOM BUSINESS DEPRESSIONS	
1. Growing Maturity of Our Industrial System.	129
2. Generation of a Nonboom Depression.	137
3. Economics of Underconsumption Recessions.	144
CHAPTER VIII CHARACTERISTICS OF DEPRESSIONS AND RECOVERIES	
1. Changes and Adjustments during Depressions	152
2. Recovery Forces and Problems.	160
3. Relations of Recoveries to Succeeding Trends	167
CHAPTER IX UPSETTING FORCES AND BUSINESS STABILIZATION	
1. Changes in Boom-generating Forces and Factors	174
2. Changes in Income Distribution Forces	180
3. Private Efforts to Stabilize Business	188
CHAPTER X GOVERNMENTAL POLICIES OF STABILIZATION	
1. Government Control over the Price Level	196
2. Stimulation of Business by Government.	203
3. Relations of Government Regulation to Stabilization	211
CHAPTER XI SURVEY OF BUSINESS CYCLE THEORIES	
1. Bases for Various Cyclical Theories.	218
2. Theories of Exchange Economy and of Money and Credit.	226
a. Nature of Our Exchange Economy.	226
b. Variations in Quantity of Money and Credit	228
3. Capital Demand and Unequal Distribution Theories	234
a. Fluctuations in Demand for Capital Goods	234
b. Unequal Distribution of Incomes.	238
CHAPTER XII FORECASTING BUSINESS CONDITIONS	
1. Empirical Basis for Forecasting	242
2. Measurement of Basic Trend Factors.	249
3. Practical Forecasting Procedure	256
CHARTS	
I. Index of Industrial Production	265
II. Index of Debits to Individual Accounts	266
III. Index of Department-store Sales	267
IV. Index of Domestic-commodity Stocks	268

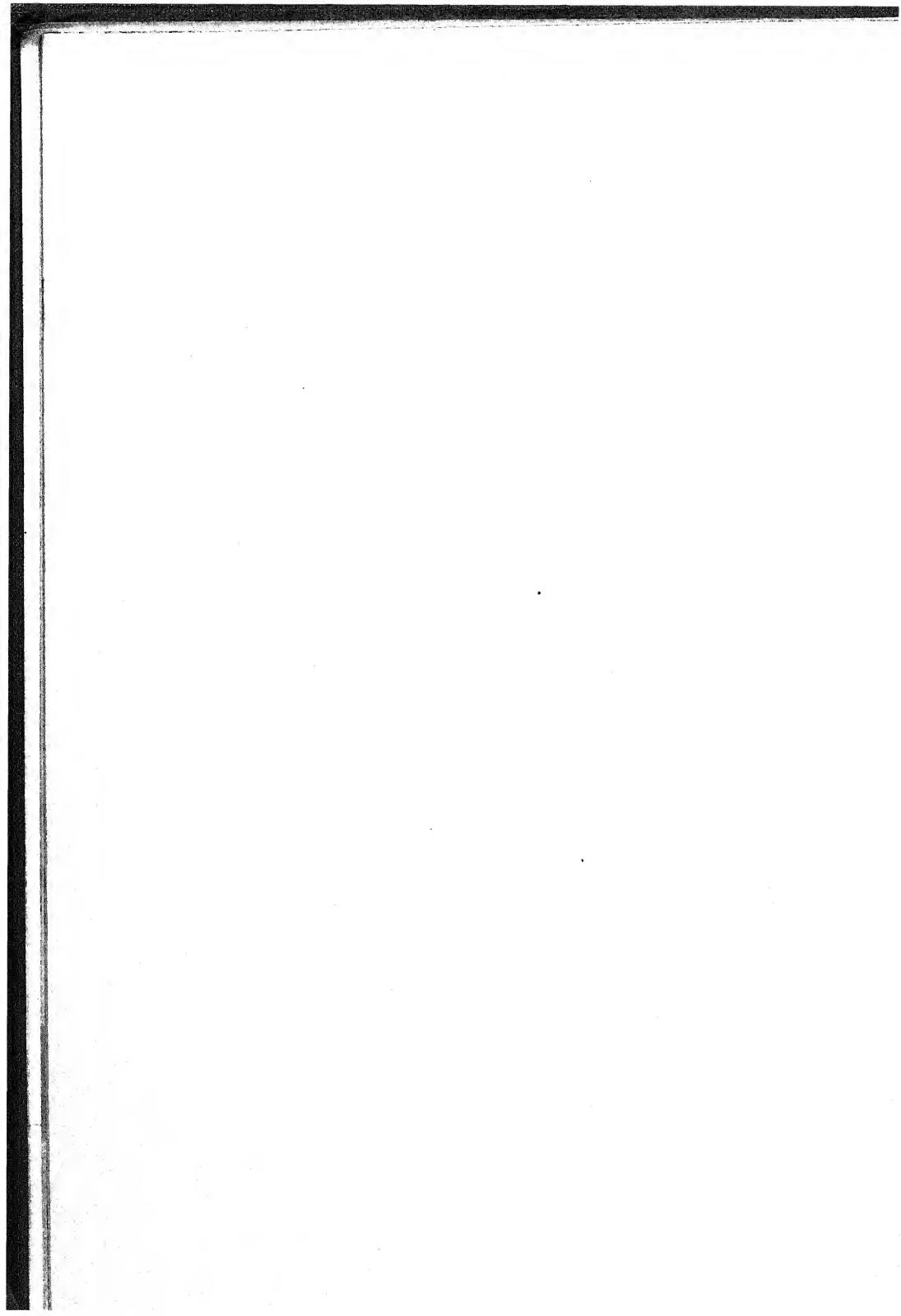
CONTENTS

xi

	PAGE
V. Index of Wholesale Commodity Prices.	269
VI. Indices of Retail Food Costs and Average Weekly Earnings	270
VII. Index of Loans of Reporting Member Banks	271
VIII. Index of Investments of Reporting Member Banks	272
IX. Indices of Net Demand Deposits and Time Deposits of Reporting Member Banks.	273
X. Federal Reserve Credit and Related Items.	274
XI. General Indices of Employment and Payrolls.	275
XII. Index of the New York Times Average of Last Monthly Prices of 50 Stocks	276
XIII. Index of Business Trend.	277

TABLES

I. Construction Contracts Awarded	278
II. All Banks in the United States—Loans, Investments and Deposits (Exclusive of Interbank Deposits) of Member and Nonmember Banks.	279
III. Individual Money Incomes as Shown by Federal Tax Returns, 1922–1935.	280–281
IV. Corporation Incomes	282
V. Capital Issues	283
SELECT LIST OF REFERENCE BOOKS	285
INDEX.	287



ANALYSES OF BUSINESS CYCLES

CHAPTER I

NATURE OF OUR ECONOMIC SYSTEM

SECTION 1

BASIC FEATURES OF THE SYSTEM

It would be impossible for one to gain a scientific or a useful knowledge of the characteristics and causes of changes in the general trend of business without first knowing something of the nature, organization, and operation of our economic system. It is needless to say that business fluctuations are due to the peculiar ways in which our economic or industrial system operates. This and the next chapter, therefore, will be devoted to a study and an analysis of the fundamentals of our present industrial system.

Our industrial system is not a socialistic or a communistic one; it is capitalistic and individualistic in its nature. It was developed upon the basis of the institutions of *private property and freedom of contract*. These two social and legal institutions determine its fundamental nature; to whatever extent either of them is changed, the basic nature of our economic system is altered. The fundamental distinction between capitalism and socialism is that under capitalism the individual engages in economic activity exclusively for his personal or private benefit, while under socialism he engages in such activity for the benefit of the social group. Private benefit can be secured only if the individual is permitted a considerable amount of freedom of economic

activity and the right to acquire, own, use, and dispose of the fruits of his own economic endeavor. Such freedom and rights are possible only under the institutions of freedom of contract and private ownership of property.

Many other social and legal institutions are necessary adjuncts to our present industrial system. Capitalism (accumulation of productive capital in private hands) could not have occurred without extensive *exchange of goods*. Such exchange of goods was made possible only by the development of a *medium of exchange* (money), so that goods could be sold at *prices* or exchanged for money. Extensive production of capital goods under the private-property system is made possible by a *money economy*. High specialization in production, furthermore, could not have developed without the use of money as a medium of exchange. The institutions of money and prices were just as essential to the development of capitalism as the institutions of private property and freedom of contract were necessary to its birth.

Production of goods and services for sale necessitated the organization of *business enterprises* to carry on such activities. A business enterprise is a legal institution organized for the purpose of producing and selling some kind of economic goods or services, with power to engage in all the economic activities necessary to its main object. A business enterprise may be large or small; it may be owned individually by one person, or jointly by many. Most of the large enterprises today are corporations with many stockholders. At present, there are only a few economic activities that are not carried on through business enterprises.

The propelling motive in the operation of the business enterprise is the desire to make *profits* for the owners and managers. (Opportunity to make profits is a necessary feature of modern capitalism.) Without the prospects of making profits, there would be little or no incentive for individuals to organize and operate business enterprises.

The institution of profits is so characteristic of modern industrialism that our whole economic system is often referred to as the *profits* system.

Those who furnish the *factors of production* to business enterprises receive all that is produced (net value) by those industries. The factors of production are designated generally as labor, land, capital, and management. The laborers employed receive a share of the production in the form of *wages*; those who lend them capital (money) receive a share in the form of *interest*; those who rent or lease them resources receive a share in the form of *rents* or *royalties*; and those who invest capital in them as owners and managers receive the balance of the net production in the form of *profits*. The wages, rents, royalties, and interest paid out, plus the profits belonging to the owners, are derived from sale of the net value created by the business organizations. The sum total of these shares constitutes the total net value created by the enterprises. (This is capitalism's method of distributing that which is produced by the industrial system.)

The operation of our industrial system is in the hands of the owners and managers of business organizations. Owing to customary contractual relationships which exist among the different classes of individuals who furnish the factors of production to business firms, the organizers and operators of these enterprises have become dominant in the industrial and business world. They are the ones who assume the initiative in making contracts with other classes, which furnish capital, land, and labor for the businesses, and on them falls the responsibility of fulfilling those contracts. This responsibility places upon them the further obligation of successful current operation of enterprises. If they fail to measure up to the responsibilities placed upon them, they do not get a return for their efforts.

Businessmen are preeminently the *risk takers* in the economic world, and they exercise this function largely

through making contracts of purchases and sales of economic goods and services. Their compensation consists of profits; profits are not made unless the negotiators are successful in their operations. While the chief object of business enterprises is to make profits, the chief function of their managers and owners is *risk taking*. The only way that profits can be made from operating enterprises is to sell the goods or services produced, at prices above their *cost of production*. Every function involved in the operation entails some financial risk to the owners. They may lose the capital they invest in the enterprise; they may not buy the right kind of capital equipment; they may buy raw materials at too high prices; they may not get adequate productivity from the money they pay laborers; they may produce too much or too little; or they may not be able to sell at a profit. Every decision made and every action taken by a manager of an enterprise involves a risk of loss as well as a possibility of gain.

(As our economic system developed into industrialism, the population was divided into fairly definite *economic classes*. From the standpoint of the system's operation, the owners and managers of business enterprises constitute the most powerful, if not the most important, economic class. Owners of investment funds and productive property who lend or rent their property to business enterprises constitute another class more or less separate from the owners and operators of business enterprises. Many property owners and investors, of course, use their wealth directly in business enterprises as owners and profit seekers. The other economic class which contributes to the productivity of business enterprises is the great class of laborers or wage earners. In addition to these three economic classes engaged in producing through business enterprises, we have the various professional classes and those engaged in rendering personal services. From the standpoint of the purchase and use of the finished goods and

services produced, we have the class of consumers, which includes everybody.

In general, there is not a definite and fast division among those who furnish the various factors of production used by business enterprises. As already indicated, those who furnish investment funds or resources (land) may be owners and operators seeking profits, or they may be lenders or lessors receiving interest, rents, or royalties from the use of their property. While laborers receive wages for their labor services to enterprises, some of them may also be part owners or investors in such enterprises. As industrialism becomes more general and reaches maturity, however, the line of distinction becomes more definite between those who furnish property (capital and natural resources) and those who supply the labor to business enterprises. In this country, we have developed a large class of laborers. At the same time, we have a very small class of powerful "captains of industry" or owners and managers of big business enterprises. This division into economic classes necessarily results in some inevitable conflicts between their group interests.)

Accumulation and use of larger and larger quantities of *capital* in production, and the control of business enterprises by those who furnish the capital involved, are the features of our industrial system which have given it the name of capitalism. (The elements of capitalism existed even before the industrial revolution, which began during the last half of the eighteenth century. Business enterprises under the earlier domestic system were owned and managed by those who supplied their capital. But the development and use of powerized machinery in production (the essence of the industrial revolution) not only made possible but actually necessitated a rapid accumulation of industrial capital. The mechanization of production resulted in a constant growth in the size of productive business enterprises, and accelerated the separation of laborers from the ownership of the tools

and machinery with which they worked. Greater use of powerized machinery increased the profits and property incomes of those who furnished the capital and property used by the enterprises. Savings and investments of the industrialists grew, and our major industries drifted more and more toward the controlling influence of a comparatively small class of captains of industry and large investors.

Another outstanding feature of our industrial system has been the increase in the *use of bank credit* in financing and operating business enterprises. The origin of commercial credit antedates the industrial revolution. But the extensive use of bank credit in connection with the organization and operation of business units did not develop until the nineteenth century.

Today, a large percentage of the circulating capital used by business organizations of all classes is borrowed directly or indirectly from commercial banks. Indeed, at times a large part of the permanent capital employed by certain business organizations is secured through bank loans. These bank loans do not consist in any great part of savings deposited in the banks by investors, but are comprised largely of bank credit (promise to pay). They have purchasing power, nevertheless, equal to the purchasing power of savings—dollar for dollar. In a large measure, bank credit is purchasing power manufactured by banks.

Extensive use of bank credit enables business enterprises temporarily to acquire new capital in excess either of their own savings or of those of the community. In other words, the use of bank credit has made it possible for business enterprises, during a limited period of time, to acquire new capital at a rate much more rapid than the current savings of society for the same period of time. This dangerous potentiality, as will be pointed out later, is one of the principal reasons why the business system is often upset and runs counter to general economic welfare.

SECTION 2

COORDINATING AND CONFLICTING FORCES

Business managers are concerned primarily with the *exchange* value of goods and services rather than with their *use* value. In operating business enterprises, businessmen are interested mainly in the profits they are to receive from producing or handling goods or services. They are interested only academically and incidentally in the usefulness of their wares to the community. The function of the business enterprise is to produce for and sell to the public in order to advance the self-interest of the owners.

There is no one individual or supercommittee with power to coordinate the operation of the various business enterprises in our industrial system. It is not necessary for the different enterprises to fit their operations into a definite national industrial plan; no such comprehensive plan exists. Yet, there is a considerable amount of orderliness and coordination in the operation of our industrial system. What brings about this order and coordination? Why are the various goods produced somewhat in proportion to the market demand for them? Why were the different industries developed into a fairly well-balanced industrial system?

Our industrial system was developed largely under the *laissez faire* (nongovernmental interference) policy of permitting the natural economic forces to have free play and take their natural courses. With the exception of government regulation of certain kinds of harmful business practices, the government's relation to business has been largely that of enforcing legal business contracts. *Self-interest* (seeking the greatest economic advantage) and *competition* are the principal economic forces which have brought about coordination among the different industries as well as a reasonable balance among the various enterprises in each industry.

Each individual or group, in establishing a new business enterprise, will choose to enter the particular field which offers the greatest prospect of profits. Under competitive conditions and with correct judgment by the organizers, the new enterprises will be established in the industries where there is the greatest market shortage of goods or services, and where there is the highest margin between prices and cost of production. If the judgment of the organizers of new enterprises is faulty, and profits cannot be made in the field of their choice, they will fail and drop out of business. Self-interest is therefore the motivating force which causes new business enterprises to be established in industries where there is the greatest public demand. At the same time competition and self-interest cause enterprises to desert those industries which are most overcrowded.

Unrestrained *competition* tends, in the course of time, to cause the price of each commodity to be set at or near the cost of production in each competitive industry. If the market price of a commodity is greatly in excess of the prevailing cost of production and profits are high, individuals will be induced to establish new enterprises in that industry. Production of that commodity will thereby be increased, resulting in a decrease in price and margin of profit. In this manner, competition brings about a considerable amount of harmony between the self-interest of the businessmen and the interest and welfare of the public. Competition thereby brings about a harmony in our whole price system. By tending to equalize profits in the different industries, competition tends to bring about more complete coordination and balance between the many industries which comprise the whole industrial system.

Just as self-interest and unrestrained competition under the *laissez faire* policy cause goods to be produced in about the right proportion, these economic forces and others bring about order in the distribution of the proceeds of production.

It is believed by the staunch advocates of the *laissez faire* policy that, under such a policy, the natural economic forces will maintain a balance between the general productive power of our industrial system and the purchasing power of the public, or a balance between the supply of goods in the markets and the effective market demand for goods. In short, they claim that the distributive processes of our industrial system operate in such a manner that an economic and industrial balance will be maintained, provided these economic forces are permitted to take their natural course. The reasoning in defense of this conclusion is as follows:

It is asserted that, under our free enterprise and price system, there can never be a general oversupply or a general shortage of goods in the markets; that the general market demand for goods will always equal the general market supply. This proposition is known as Say's *law of the markets*.¹ Say asserts that it is true because the process of producing any quantity of goods for the market creates value (purchasing power) equal to the value or price of the goods produced. Money is only a medium of exchange; each individual acquires a demand for goods equal to the value of the goods he creates; goods are exchanged for goods and the general demand for them must equal their general supply.

Under the condition of a stable price level, Say's *law* would be true for any given period of time provided: (1) all goods produced were placed on the market immediately, (2) buyers acquired or possessed purchasing power exactly equal (no more and no less) to the value of all goods produced for the markets, and (3) all this value (purchasing power) created by production was distributed among buyers in such a manner that those who received it immediately used all of it to purchase the goods produced.

In the operation of our industrial system, however, there has been a fluctuating use of bank credit. As a result, the

¹ J. B. Say, *Traité d'économie politique*, Bk. I, Chap. XV.

general price level has not remained stable for any long interval, but has fluctuated rather violently at times. Furthermore, because of the roundabout system of production and our complicated system of distributing and using the proceeds of production, neither the flow nor the use of purchasing power has been in direct proportion to the value of the goods currently produced. Because of these facts, there have been many cases of temporary lack of balance between the general market supply of goods and the general market demand for them. In short, in the actual operation of our economic system, we have passed through periods of a general oversupply of goods in the markets, as well as through periods of a general market shortage of goods. If the general market supply and the general market demand were always in balance, large business fluctuations could not occur.

Say's so-called *law* would be true if our economic system worked smoothly and perfectly at all times. In other chapters of this book it will be pointed out that as a result of the fluctuating use of bank credit in business, and because of fluctuations in the general price level, the balance between supply and demand in the general market is frequently upset. It will also be shown that it is necessary to maintain a workable ratio between the expenditure and the investment of the proceeds of production, in order to retain a balance between demand and supply in the general market. In this connection, it will be shown that a faulty ratio between saving and investing is due to flaws in the operation of our methods of distributing the proceeds of production. In other words, the two most important forces which prevent the smooth and continuous operation of our industrial system are the unwise use of bank credit and the defects in the operation of our processes of distributing the proceeds of production. In Chapter II we shall describe the operation of our processes of distributing that which is produced, and show how a balance in the markets might be secured.

The theory that, under our industrial system, the individual best serves society in his economic activities by following his own selfish interest is little more than a half-truth. In reference to particular economic activities the statement is doubtless true. But certainly it was never true of some economic activities under any conditions. The payment of very low wages to laborers may be to the interest of employers, but the practice was never to the interest of society. Securing a monopoly and charging monopolistic prices is absolutely contrary to public welfare, though it may be very lucrative to those who participate in such economic practices. Destruction of part of the supply of a particular commodity may enable the holders to secure more money for the remaining supply, but such action is not likely to benefit society. Misrepresentation of facts or of goods in business transactions may pay the liar, but public welfare will be injured.

The defenders of the unerring efficacy of the *laissez faire* policy would maintain either that such economic practices as enumerated above could not occur under our economic system or that they are abnormal and exceptional. But an examination of our industrial history indicates that monopolistic practices are quite common, if not so common as competition; that misrepresentation and fraud are so common that it is necessary to have many laws against these practices to punish the offenders. According to neoclassical economic theory, of course, it would not be possible for an employer to hire laborers at exceptionally low wages; but the prevalence of the practice disproves this wage theory.

By no means does there exist complete harmony between general business prosperity (as the business leaders interpret it) and the general welfare of the public. Increasing prices and rising profits penalize the great mass of wage earners and those living on fixed incomes. Credit inflation brought about by businessmen for their own benefit will

eventually injure the welfare of the public. High profits rob the other income receivers, as well as the consumers.

At certain times our industrial and business order is so completely upset that the dislocation is termed a *crisis*. Industries are curtailed, production is decreased, laborers are thrown out of work, and the economic welfare of all is injured. Again, at other times, the varying trend of business changes the flow of money income and real income to the different economic classes. These constant fluctuations in business also have an adverse influence on the habits, morality, and integrity of the public. The great fluctuations in business conditions, with the consequent upsetting of the industrial system, furnish concrete evidence of the inability of the natural economic forces to operate the industrial system so that it will serve, at all times, the greatest economic welfare of society.

It would be much more beneficial to the public if the industrial system could remain in perfect balance and at the same time make continuous progress in advancing the economic welfare of society. If the fluctuations or cyclical movements of business could be eliminated, the industrial system and the whole economic organization of society would undoubtedly remain in a state approaching an economic balance or equilibrium. If our industrial system could be so controlled as to preserve an equilibrium, all the losses and annoyances brought about by business fluctuations would be eliminated.

SECTION 3

MEANING OF TRENDS OF BUSINESS

If one glances over the financial page of any daily newspaper, he is likely to find the opinion expressed that "business is falling off" or that "business is picking up." During periods of high prices, reviewers of the trend of business

sometimes express the opinion that, while business is still good, the underlying economic conditions are unsound. And, conversely, during periods of stagnant business, they often tell us that, while business is small in volume and prices continue to decline, the underlying economic situation is healthy. What is meant by *trends of business*?

When the statement is made that "business is picking up," it is an indication that businessmen are finding their operations more profitable, either because of an increase in the volume of trade or because of higher prices. If business is pronounced "poor," it is meant that the volume of trade is small or that prices are weak and profits small.

When business conditions are contrasted with underlying economic conditions, the word *business* is used in a restricted sense to mean trade conditions, or volume of mercantile transactions at certain price levels and profit margins. The "underlying economic conditions" referred to are those factors in our industrial system upon which business depends. Among them are such factors as the volume of production, stocks of goods, credit conditions, new investments made, and the relative incomes of the different economic classes. The trend of business, therefore, is synonymous with the trend of the markets.

As already pointed out, motive force in the operation of business enterprises is profit or prospect of profit. In the opinion of businessmen, business is good when they receive satisfactory profits. The three basic factors upon which an increase or a decrease in profit depends are: (1) a change in prices, (2) a change in the cost of production with a corresponding change in prices, and (3) a change in the volume of sales, with unchanging costs and prices. A general decrease in the cost of production and an increase in prices and the volume of sales would cause business to "boom"; but a reverse movement of these factors would cause business to become seriously depressed.

A general increase in the price level always increases at once the profits of all business enterprises. This is true because, first, the cost of production does not rise so rapidly as do prices of commodities and, second, an increase in the price level usually is attended by an increase in the volume of sales. A rapid decrease in the price level, on the other hand, results in a decrease (or elimination) of profits in all businesses. Under such conditions many enterprises sustain great losses. A sharp decrease in the price level is always attended by a large decline in the volume of sales. Generally, a rise in the price level is accepted as an indication of definite improvement in business conditions, and a decline in prices as an indication that business is "falling off."

General business, however, may improve greatly without causing a rise in the general price level. An increase in the volume of sales may occur under a stable or a slightly declining price level. Such a rise in the volume of business would stimulate production and increase profits. Furthermore, extensive technological improvements in methods of production may lower the cost of production in the enterprises affected, causing an increase in profits and resulting in a general rise in the volume of production and sales. Other cost-reducing forces, such as cheaper resources, may have the same influence in increasing profits. During the twenties, when business enjoyed great prosperity, there was no rise in the general price level. At that time there were extensive technological improvements in methods of production and enormous increases in profits, in the volume of production, and in sales.

While general business may improve under a stable or a slightly falling price level, a decline in business is always attended by a decline in prices, as well as by a falling off in sales and in production. As we shall see later, it is the drastic reduction in volume of sales at such times that causes prices and production to decrease.) The outstanding char-

acteristic of a recession in business is the dwindling volume of sales, just as the outstanding characteristic of an improvement in business is the rising volume of sales.

While profits, prices, sales, and production costs are the principal factors involved in the trend of business, there are many other classes of statistics which are used to measure and interpret the trend. Among them are the following: statistics on the volume of production of goods, the number of people employed and the number unemployed; the accumulation of stocks of goods and raw materials by producers and middlemen; the orders for goods booked; the volume of current commercial transactions as indicated by bank debits and the volume of railroad traffic; the conditions of the money and credit market as indicated by bank loans and discounts, deposits, reserves, and rates of interest; the volume of new construction; the quantities of new securities placed on the market; the building permits issued; and the profitability of business as indicated by dividends, by the prices and quantities of securities bought and sold on the exchanges, and by the number of business failures which occur. The interpretation and use of these various statistical data in measuring and analyzing the various trends of business will be found in Chapter IV.

At all times, business is either following some kind of trend or going through the process of changing from one to another. There are only three directions in which the trend of business may go. It must pursue a horizontal or level course, or it will go upward or downward. After allowance has been made for natural or secular growth, never for any considerable period of time has business in this country followed a horizontal or level trend. During most of our national history, the trend of business has been definitely upward or positively downward. Great upward trends have always been followed immediately by sharp downward trends; frequently downtrends have been succeeded immedi-

ately by great upswings, but "booms" do not always follow immediately in the wake of downswings.

The alternation between upswings and downswings in the trend of our business has been by no means regular in point of time. Neither the upward trends nor the downward trends have been uniform in intensity, magnitude, or duration. We have had slow and mild upswings with both long and short duration, and we have had rapid and great upswings with both long and short duration. We have also had slow and mild downswings with both long and short duration, as well as rapid and great downswings with both long and short duration. During other periods of time, business has followed an oscillating horizontal course. There has been no regularity of timing between one big upswing in business and the next one; neither has there been any regularity in point of time between one big downswing and the next one.

In this country and in other industrialized nations, however, there has been sufficient regularity in the alternation between upswings and downswings in the trend of business, so that students of this great problem have concluded that business moves in a rhythmical or cyclical trend. These general wavelike or cyclical movements of business they have designated as *business cycles*. A complete wavelike movement of business (from the beginning of one downward trend to the beginning of the next, or from one upswing to the next) is considered a *business cycle*.

In a later chapter we shall see that the business cycle may be divided into different segments or phases, and that each of the phases may be studied and analyzed in reference to both the phase which precedes it and the one which follows it. Many students study and analyze these cyclical business movements in order to determine their nature and discover remedies for them. This book is such a study, and is based,

in part, upon the previous studies of many other students of the problem.

In addition to discussing several other problems relative to business cycles, we shall endeavor to answer the following specific questions concerning these cyclical trends:

1. How often do they occur, and what are their characteristics? How are the cyclical movements measured, and what are the interrelations of the different phases?

2. What brings about the cyclical movements? Do the inherent characteristics of our economic system bring about the fluctuations, or can the system be altered in operation so as to eliminate the fluctuations?

3. What reforms must be made in our business practices in order to eliminate extreme fluctuations? To what extent should these changes be made, and how should they be made? Should they be made by intelligent self-interest or by a definite government policy?

Before attacking the specific problems of business cycles, we should have definite knowledge of the fundamental interrelationships in our industrial system and know how this system would operate under a stabilized industrial and business situation. Chapter II will be devoted to such a study.

CHAPTER II

INDUSTRIAL AND BUSINESS STABILITY

SECTION 1

PRODUCTION, SALE, AND DISTRIBUTION OF THE NET PRODUCT

We know already that production in our economic system is carried on through business enterprises. We are also aware that business enterprises produce goods and services for the purpose of selling them to buyers at profitable prices.

There is a definite division of production of different kinds and classes of commodities among the different industries. A high degree of subdivision of the various productive processes among different kinds of business enterprises has grown up in each industry. Usually, there are many competing enterprises in each subdivision of every industry. In our economic system as a whole, production is carried on by a host of supplementary and interdependent enterprises, as well as by a great number of competitive industries and enterprises. Most of the numerous subdivisions of the productive processes among different kinds of enterprises came about as a result of extensive mechanization of production methods. Great specialization in production, throughout our industrial system, resulted in an indirect, roundabout, complicated scheme of production. Because of this indirect plan of production, the span of time from the beginning of production to the completion of most finished products has increased constantly.

Because of the division of the productive processes among different industries and among the various classes of enterprises in each industry, only a small percentage of the total number of enterprises are engaged in producing or selling finished consumers' wares or goods ready for human con-

sumption. The vast majority of them confine their activities to producing, handling, or selling commodities which are purchased by other business enterprises for use in further production.

The annual net production of a factory (net value created by it) and its annual production (value of its total output) are two quite different things. In most cases, the value of the goods turned out by a factory in a year is much greater than the net value created by it during the same period of time. The net production consists only of value added to the goods utilized in the productive processes. It is necessary to deduct the value of the goods used in the productive processes from the total value of the goods turned out, in order to compute the net value created by an enterprise. In some enterprises, the net production value would be only a small percentage of the total value of the output, while in others it would be considerably more than half the value of the output. For the enterprises in the manufacturing industries, the combined annual net production is probably about 50 per cent of the total value of the goods turned out by those enterprises. In the merchandising industries, the average net production value per enterprise is probably less than 30 per cent of the value of the goods sold. But in the mining and agricultural industries, the net value produced per enterprise is probably more than 80 per cent of the annual value of their output.

In order to compute the net value (net production) created by any business enterprise, the value of all the goods and services purchased from other enterprises and utilized in the productive processes must be deducted from the value of the goods or services turned out by the enterprise. The various classes of items which must be deducted from the total value of the output are: (1) raw materials and partly finished goods used, (2) business services purchased from other enterprises, such as transportation and insurance (but

not including interest, rents, and wages to those who supply the factors of production), and (3) wear and tear, depreciation, and obsolescence of the capital used in the productive processes. These items include all payments made by the enterprise in operating *except* the payments made for the use of the factors of production. Then, whatever remains from the sale of its total output is the net value which was created by the factors of production.

Those who furnish the factors of production to an enterprise receive the proceeds from the sale of the net value it creates. In short, the money received from the sale of the output of an enterprise is paid out in two ways, as follows: first, part of it is used to pay for the goods and business services utilized in the productive processes, and second, the balance is distributed among those who furnished the factors of production. The first class of payments is made for the *transfer* of value; the second class is made for the *creation* of value—for the net product.

We have seen that the chief function of money in our economic system is to serve as a medium through which goods and services can be exchanged, one for another. In performing the function of a medium of exchange, money is also used as a measure of value (price, or exchange value of goods in terms of money). In addition, money is frequently used as a temporary store of value by individuals saving and accumulating money itself. From the standpoint of carrying on the normal functions of our industrial system, an adequate supply of money is needed to perform its function as a medium of exchange. For example, if we assume that, on the average, every dollar is used fourteen times each year in business transactions, and that the pecuniary volume of all business transactions in the country for the year is five hundred billion dollars, it will be necessary to have about thirty-six billion dollars to perform the function of medium of exchange.

The "money" we now use consists of various kinds or classes. Each variety of money is based directly or indirectly upon gold as the standard of value. We have in use the following kinds of money: coins (silver, nickel, and copper), gold and silver certificates, treasury notes, national-bank notes, Federal Reserve notes, and demand deposits in banks. Ordinarily, the bank check (transfer of a certain amount of bank deposits from one to another) is used to settle about 85 per cent of all business transactions. We shall discuss later the problems which arose as a result of using bank credit to create demand deposits which, in turn, are used as purchasing power (money) in business transactions.

Money circulates in our society in a roundabout fashion. Its circulation is propelled by its being paid by one party to a business transaction to the other party to that transaction in exchange for goods or services of some kind. During the course of a year, a business enterprise receives a certain sum of money for the goods or services it sells. In the course of its operations, it pays part of this money to other enterprises for the goods and services it purchases from them to use in production. The balance of its money receipts it pays out as wages, rents, royalties, interest, and profits to the individuals who furnish its factors of production. Individuals who receive money from business enterprises use it either to purchase goods and services for the satisfaction of themselves and their families (spend it), or they use it to purchase productive capital goods (invest it). In either use of the individual's income, the money flows directly or indirectly back to business enterprises in payment for goods and services.

Excluding fluctuating use of bank credit, all the money that passes through the hands of established and operating business enterprises is received from the sale of their products or services. All enterprises, of course, receive their capital funds from individual investors. Many enterprises

sell their products to other business enterprises, while some sell directly to individuals. All the money received by enterprises is paid out in two streams. One goes to other enterprises in payment for products used in production; the other goes to the individuals who furnish the factors of production. All the money in circulation at any one time is in the hands of the various business enterprises and individuals of the community. They will use it currently to purchase goods and services, or for the settlement of previous obligations.

Production is the source of individual money income. All the net value created by business enterprises belongs to those who furnish the factors of production, and they receive this value in the form of wages, rents, royalties, interest, and profits. These payments constitute the national money incomes paid out by all business enterprises. The money incomes paid out by business enterprises, if all profits are divided, will equal the money value of the net production. Consequently, if all the money received for the net product is paid to those who supply the factors of production, the money value of the net production of all enterprises is equal to the money income paid out by them. Individuals engaged in the professions and in rendering personal services produce services and receive incomes for those services. The payments to them are made from the money incomes of other individuals. In other words, the payments for professional and personal services are made indirectly from the proceeds of the net production of business enterprises.

The current money incomes of all individuals in the nation for any given period of time, such as one year, constitute the *national money income* for that period of time. It is clear that the total national money income for a year is equal to the money value of the total net production of goods and services by the nation during the year. This must be true

because when all the money received for the net production of goods and services is paid to individuals as money incomes the two factors must be equal. No legitimate money income can be derived from any source other than contribution to production of goods or services. The net production of goods and services of our economic system for a given period of time is frequently referred to as the *national net product* for that period. In terms of money value, then, the national net product and the national money income are equal—the former creates the latter.

All taxes must come out of the national money income. Individuals who bear the burden of taxes have their incomes reduced by the amount of the taxes paid. All the money collected as taxes by the various governmental divisions is spent to operate the government and is paid to individuals and enterprises for services and goods. Very little of the government's income is invested in productive enterprises; most of it is spent. If the budget is balanced, the government merely spends part of the national money income taken from individuals. These individuals merely pay for governmental services to society as they pay for professional and personal services.

Provided the value (price) level is stable, the current national money income can be used to purchase goods and services equal in value to the current net product (net production of goods and services) of the nation. The goods which are purchased with the national money income are, of course, finished consumers' goods or finished capital goods. Usually more than 90 per cent of the money income derived from business enterprises is used to purchase consumers' goods and services, and less than 10 per cent of it is invested in new capital for further production.

In the normal operation of our industrial system, the value of the finished goods and services purchased by individuals will equal the value of the net product of our economic

system. Normally, therefore, our industrial system currently must turn out finished consumers' goods and services and new capital goods equal in value to the net product of industry. The national money income is not used directly to buy the net product (value added by current production) of our economic system; it is used to buy finished goods and services equal in value to that of the net product. To permit the national money income to be so used, our industrial system currently must turn out finished goods and services equal in value to its current net production. Competition and self-interest tend to induce the industrial system to place finished goods and services upon the markets in such a ratio to the system's net production.

All existing equipment, raw materials, and unfinished goods represent the past accumulation or capital savings of the nation. The value of the accumulated capital goods in our industrial society today is probably four or five times greater than its annual net product. Current production of industry constantly adds to this accumulated stock of goods; and the sale of finished consumers' goods and services constantly reduces it. Savings and investments make permanent additions to our accumulated industrial stock of goods. A great capital accumulation is a necessary adjunct to our indirect, roundabout system of production.

As the primary object of all economic productivity is to produce goods and services which will satisfy human desires, the ultimate value of all economic goods will depend upon their use in the production of finished goods and services which will be purchased by individuals for the satisfaction of their wants. The whole value structure in our economic system is dependent upon consumers' effective demand for the finished consumers' goods and services produced. An effective consumers' demand depends upon (1) a desire for the goods and services and (2) the possession of purchasing power with which to buy them. (The heart of the problem

of economic and industrial stability is that of a balance between the production of consumers' goods and services on the one hand, and consumers' effective demand for such goods and services on the other.

SECTION 2

FEATURES OF A STABILIZED INDUSTRIAL SYSTEM

It is not necessary to have a static economic system in order to have a stabilized one. A system which operates smoothly and continuously at full capacity is one in a stable but not necessarily a static condition. If our business and industrial system could be made to operate at full capacity at all times, it would continue to be a highly dynamic one; it would also be a highly progressive one in that the nation could make solid and continuous economic progress under it. The essential difference between a stabilized industrial system and a fluctuating one is that the former operates fully and continuously, while the latter does not.

In order to secure complete and continuous operation of our industrial system, it is necessary to maintain a proper balance between net production, national money income, the flow of finished goods, and the expenditure and investment of the income. All forces which tend to upset these balances must be controlled if our industrial system is to operate on an even keel. What are the proper relationships among these factors?

It has been observed already that, under a stabilized general price level, if all the proceeds from the net product are paid out as income, the current national money income will equal the value (price) of the net production of our industrial system. All proceeds from net production should be paid out to keep these two important factors in balance at all times. The holding back of large corporate profits in the form of cash surpluses tends to upset the balance between net production and national money income.

To secure stability of operation, there must be a balance between the flow of the national money income and the flow of finished consumers' goods and services and new capital goods into the markets. The value of all the finished goods and services produced for sale should exactly equal the national money income, and the national money income should be used to purchase these finished products. It is highly important, if the industrial and business balance is to be maintained, that no purchasing power other than the national money income be used to purchase either consumption products or new capital goods. Whatever the extent to which credit purchasing power is used to supplement money income in the purchase of finished consumers' and capital products, to that extent the balance between national income and the sale of finished goods and services is upset. The extensive use of personal, bank, or government credit for this purpose will not only upset the balance between these two forces; it will also bring about a fluctuating business and industrial situation.

If we are to have a stabilized industrial system, it is just as essential to maintain the proper balance between the expenditure and the investment of the national money income as it is to have a balance of net production, national money income, and the sale of finished consumers' and capital products. It is possible to save and invest either too little or too much of the national money income. It is equally possible to spend either too much or too little of the national income. What is the proper balance between the spending and the saving of the nation's income?

If there were no industrial savings and investments (purchase of new capital goods used in production), there would be no increase in the productive capacity of our industrial system other than some growth in production due to technological progress in methods and processes. In short, without industrial savings there would be no growth in the

amount of productive capital, and very slow progress in increasing the volume of production. On the other hand, should a very large portion of the annual national money income be saved and invested in business enterprises, there would result a rapid increase both in the productive capacity and in the volume of production of our industrial system. Truly economic progress is impossible without an increase in national production; savings and capital investments, then, are essential to economic progress.

But in a mature industrial system like ours, too much of the current national income can be saved and invested in productive capital. Any increase in the volume of production as a whole will result eventually in an increase in the production of consumers' goods and services. As our industrial system reaches maturity, the value of the output of consumers' products increases as fast as or faster than the value of the net product, or the national money income. The capacity of industrial production is too large relative to consumers' expenditures, whenever the value of the current flow of consumers' goods and services into the markets becomes larger than that portion of the national income used to purchase consumers' products. Too much of the national income is being saved and productively invested then, and too little of it is being spent to buy the fruits of industry.

If our industrial system, at its present stage of development, turns out in its normal operation finished consumers' goods and services with a value equal to 96 per cent of the current national money income, and only 80 per cent of the income is used to purchase such goods and services, there will be a general market surplus of such goods. If the value of the finished consumers' goods and services equals 96 per cent of the money income, it will take 96 per cent of it to purchase these products. The value of all finished consumers' wares sold must equal that portion of the national

income used to purchase them. In short, consumers' purchasing power must keep pace with the value of the consumers' products placed on the market. If it does not, there is a general market oversupply of consumers' goods.

Some savings and new investments in enterprises are necessary, of course, in order to make substantial progress in increasing the volume of production. If a very large portion of the national income is saved and invested in new productivity, on the other hand, a large surplus of consumers' wares will accumulate eventually in the market because of the inadequacy of the income spent to purchase those wares. Apparently, as our industrial system becomes more completely developed, a progressively smaller percentage of the national income should be saved and invested in new productive capital in order to keep business and industry stabilized.

A completely mature and nonexpanding industrial system would normally turn out consumers' products equal in value to the net product of the system. It would then require all the national money income to purchase all the consumers' wares produced. Then, if there were any savings and investments from the national income, under a stable price level, these would tend to create a market surplus of consumers' wares.

A balanced and progressive capitalistic industrial system should have a slightly declining, rather than a stable, general price level. The decline in the price level should not be great, but it should be sufficient to adjust individual prices to the declining cost of production caused by technological improvements in methods and processes in industry. The gradual decline in the price level, furthermore, would tend to prevent the accumulation of a surplus of consumers' wares in the markets as a result of the saving and investment of a small part of the national income. Under such a price level, there could be a business and industrial balance and a

definite, constant increase in production and consumption. Such an operation of our industrial system would result in positive economic progress and a progressive standard of national well-being.

The stabilization of our industrial system would not mean that every business enterprise or that every industry would be completely standardized and stabilized in operation. Under industrial stabilization, individual prices might go up or down. New industries might be established, old ones might decline, and technological changes in the methods of production and in the character of products might revolutionize established industries, without upsetting the balance in the industrial system. Rents, interest, wages, and profits might and should change under stabilized industrial conditions, but, as we shall learn later, they should change only in certain definite directions.

As was emphasized at the beginning of this section, a stabilized industrial system may be a highly dynamic one, so far as internal changes are concerned. But in order to be kept in a stabilized state, the balance of net production, national income, and flow of finished products, and a proper ratio between spending and saving, must be maintained at all times. If this is done, the system probably will have a continuous operation and an increasing rate of production, and the people will have a constantly increasing supply of goods and services to consume.

Under a condition of industrial balance, foreign trade would not be a disturbing factor so long as the value of the goods and services in the exports equaled the value of the goods and services in the imports. A perfect balance of foreign trade would simply mean the widening of the balance between nations, just as the balance exists among the different territorial sections within this nation. In the long run, there is a tendency toward the equalization of imports and exports but they are not equal for short periods of time. A dis-

equilibrium of foreign trade, resulting from international loans, would disturb the domestic equilibrium by increasing or decreasing the quantity of purchasing power and by affecting the amount of goods exchangeable.

The ownership of land and permanent capital goods is frequently transferred from one individual to another in modern economic society. Many of the transfers are in the nature of legacy transfers, and therefore involve no money consideration. Both land and permanent capital goods, however, may be bought and sold. Each transaction requires the use of money. In an economic society in perfect balance, such transfers would be limited by the amount of reserves of purchasing power each individual had on hand at any one time, and the transfer of the reserve purchasing power from one set of individuals to another would in no way upset the general balance. The purchase of land and permanent capital goods is not, as a matter of fact, limited by reserve purchasing power in the hands of individuals; such purchases are also made through the use of bank credit. The introduction of new bank credit would, in a measure, upset the equilibrium. Speculative transfers are a prime consideration in analyzing the forces which tend to bring about changes in the business trend, because they involve the expansion of bank credit. For this reason, we exclude them from our concept of a perfect business and industrial balance.

It might be said that in our discussion thus far it has been assumed that all goods which are produced are bought and sold in the markets. But, as a matter of fact, not all the goods produced are sold. Some goods are consumed directly by those who produce them, and money is not used in connection with either their production or their consumption. Farmers often hire labor to be used in the production of corn which they do not sell, but feed to livestock. Money is therefore used in paying for the production, but it is not used

in connection with the consumption of the corn. The processes of production and distribution, however, are not completed until the farmers sell their livestock, in which case the production of the corn would occupy a position in the economic system analogous to that of the production of ore by a smelting company which refined the ore. If the farmer employed labor to produce vegetables which he himself used, the wages paid the laborer would occupy the same position in our economic organization as fees which he might pay a physician. The wages would have to be paid out of his money income, and this process would thereby transfer to the laborer who received the wages, a part of the farmer's ability to purchase additional goods in the market.

SECTION 3

PRINCIPAL UPSETTING AND STABILIZING FORCES

What is the value of knowing the proper and exact relationships which would exist among the fundamental factors in the operation of our industrial system, if it retained an industrial and business balance? It might be argued that such knowledge is of little practical value, since the system is seldom in perfect balance at any time. On the contrary, the almost persistent lack of balance in the operation of our industrial system has been due to the fact that its fundamental factors have not been kept in their proper relations. If they were so kept, our industrial system would best serve the interests of society.

Not only is it necessary for us to know the proper relationships which should exist among the factors of our economic system, if we are to control the forces which prevent its steady and continuous operation; it is equally essential that we know the nature and characteristics of the forces which upset these desirable relationships. The balance of the net product, the money income, and the flow of finished consumers' and capital products, as well as the

correct ratio between spending and investing the income, may be overthrown by any one of the following forces: (1) alterations in the monetary system or policies of the country, which result in changes in the purchasing power of the dollar; (2) addition to or subtraction from the purchasing power of the current money income by expanding or contracting the outstanding bank credit; and (3) the saving and productive investment of an excessive portion of the current money income.

There have been few cases in our national history where changes in the coinage or currency system have been sufficiently drastic to upset seriously our industrial and business balance. The issuance of the greenbacks (treasury notes) during the Civil War resulted in considerable inflation of the general price level and thereby contributed to the disruption of our industrial balance at that time. As a consequence of the silver acts of 1887 and 1890, the gold reserve which supported our monetary system was largely depleted, and violent disturbances in our price level terminated in the panic of 1893. The Roosevelt monetary policy of 1933, by decreasing the gold content of the dollar, caused much business uncertainty and some inflation in the general price level, which added to the existing disturbances in our industrial and business system.

Theoretically, a great increase in the import or export of gold, or a rapid increase in the domestic production of gold, might disturb the general price level and upset the business equilibrium. As a matter of fact, however, unless such changes in the supply of gold resulted in endangering the gold reserves behind the dollar, such changes would have little or no effect upon the general price level. This is true because an increase or a decrease in gold certificates in circulation could have little effect upon the quantity of money in circulation in this country. Such certificates constitute too small a percentage of the total money in

circulation for a big change in their quantity to influence greatly the general price level. But should the supply of gold decrease enough to endanger the gold reserve behind the dollar, there would be a major disturbance in our price level and wild speculation would follow.

Periodic expansion and contraction of outstanding bank credit in this country, heretofore, has been the most evident disturbing force to our industrial and business balance. The specific reasons why bank credit was expanded, at various times in the past, will be discussed in a later chapter. At this point, we are interested only in the effects of its expansion and contraction upon the stability of our economic system.

The expansion of bank credit causes an immediate increase in the current purchasing power of buyers. This new credit purchasing power is added to the normal purchasing power of business enterprises and individuals derived from the sale of goods and from money income. Its creation, then, results in an increase in demand for all kinds of goods in the markets. Consequently, the market demand for goods exceeds the market supply, and there is a rise in the general price level. Because of the excess market demand for goods and the rise in prices, the balance among net production, current money income, and the flow of finished goods into the markets is completely destroyed. There have been many notable instances in which outstanding bank credit in this country has been expanded sufficiently to cause a general market shortage of goods and a spiral uptrend in the price level.

The worst cases of price inflationary credit expansion in this country have been during war periods. Governmental war expenses always have been met in large part by extensive government borrowings, which have resulted in great expansion of bank credit. At such times, the government's huge purchases of goods and services with new credit pur-

chasing power upset the market balance and cause prices to rise rapidly. The added supply of money (purchasing power) needed as a result of the higher prices is derived from further expansion of bank credit. War inflation is always attended by great speculation in goods and securities, which results in higher prices and still more expansion of bank credit. The most unbalanced relationships of the basic factors of our industrial system occur at such times.

Price inflational movements always come to an end, and are succeeded by a reverse movement of contraction of bank credit and deflation of prices. We shall learn later why deflation, with its attendant happenings, always follows inflation, with its concomitant occurrences. It is necessary here only to point out that contraction of bank credit results in increasing the market supply of goods and in reducing the current buying power in the markets to the extent that credit is contracted. Bank loans are paid off with cash savings, with proceeds from the current money income, or with proceeds from the sale of accumulated goods. Either of the first two methods of payment will result in a general decrease in market demand for goods, and payment by the last method increases the supply of goods thrown on the markets. Contraction of bank credit, therefore, can occur only when there is a decrease in market demand and an increase in market supply of goods in general. Consequently, a contraction of outstanding bank credit will cause the market supply of goods to be in excess of the market demand for them. Then, inevitably, the general price level will decline, which in turn will be followed by a decline in profits, production, etc.

Until 1929 few, if any, cases of excessive savings and investments were thought to be the principal cause of the subversion of balance in our industrial system. There have been many cases, however, in which excessive savings have accompanied an inflational rising price level. By 1907 our

industrial system had reached a considerable degree of rounded development or maturity. In 1929 we had a notable case of excessive savings and capital investments playing the principal role in destroying the balance in our industrial system. As a result of enormous savings and investments in new and old productive enterprises, and of a rapid increase in the productive capacity of our consumers' goods industries, the flow of consumers' products in the markets increased in volume and value more rapidly than that part of the national money income used to purchase consumption goods and services.

Because of the inability of consumers to purchase all the consumption products our industrial system was capable of producing, the enterprises producing such goods and services were unable to operate at full capacity. Other industries depending upon the consumption goods enterprises were also forced to curtail their production. The nation had a market excess capacity of production in 1929. An excess portion of the national income had been used to increase our capacity of production, and too small a portion of it had been used to purchase the goods and services for human use which the industrial system was capable of producing. A decline in new industrial investments caused a decline in prices and production in general.

In other chapters of this book, we shall show why and how it came about that too large a part of the national income was saved and invested, and too small a part of it was spent for goods and services to satisfy the wants of the people. The causes for governmental "tinkering" with our monetary and currency systems will also be discussed later, as will the causes of the fluctuations in the volume of outstanding bank credit. At this point, the only objective is to point out why and how these forces destroy the balances in the operation of our economic system and bring about great fluctuations in the trend of business. We shall find

in later discussions, furthermore, that movements in foreign trade as well as in international financial transactions may disturb the even operation of business and industry. These disturbing forces and other minor ones, however, are more or less secondary in their effects upon the balance in business and industry. Most of these secondary upsetting forces themselves are set in motion by one or another of the major or primary disequilibrium forces.

The fact that the operation of our industrial system breaks down, as a result of lopsided inflationary boom conditions, shows that certain of its fundamental balances must be maintained to secure continuous operation. Equality of value among net production, money income, and finished products placed on the market, as well as a correct ratio between the expenditure and investment of the income, then, are the most important stabilizing forces in the whole system. These equilibrium factors, however, are subject to temporary overthrow by the upsetting forces discussed above. The disequilibrium among net production, money income, and sale of finished products in due time will result in a market surplus of goods, falling prices, curtailed sales and production, unemployment, and a decline in profits and other incomes. Eventually, this downward movement in industry will result in the reestablishment of a workable balance of these factors. Then net production, income, and sales again will rise simultaneously.

It has been observed already that productive investment of an excessive portion of the money income also results in a market surplus of finished goods and a downward movement of prices, sales, production, and income. This general business and industrial decline will stop when many readjustments are made and most of the surplus goods are absorbed. Then there will develop a workable balance among the fundamental factors and an uptrend in business will be likely. While the stabilizing forces can be overthrown temporarily, at the end of a destructive cyclical

upward and downward movement in business and industry, they will reassert themselves. When the balance is upset, these stabilizing factors appear not to be able to reestablish an equilibrium until business and industry have gone through a destructive downward movement of falling prices, sales, production, and income. The completion of the downward movement appears to be the only way in which an equilibrium can be reestablished in our industrial system, once the balance has become seriously disturbed.

In the first chapter, it was pointed out that competition and self-interest under the freedom of contract, price, and profit plan are coordinating and unifying forces. Combined, they tend to maintain order in the operation of business and industry. But, as a result of the growth of large-scale industry, competition in many businesses and industries has been supplemented or replaced by restraints of trade and monopolistic practices. As we shall see later, the prevalence of monopolistic practices in business is one of the principal causes of the upsetting of the correct ratio between the investment and expenditure of the income, a condition which brings about an unbalanced industrial situation.

Self-interest alone is as much an upsetting force as it is a stabilizing one. It is self-interest on the part of business managers which, in many cases, causes credit expansion and price inflation movements. Self-interest also causes excessive profits and overinvestments, which upset the equilibrium in industry. The *laissez faire* theory, as we have seen, holds that the natural economic forces (principally competition in fixing values) will restrain self-interest so that the individual, in pursuing his interest, will always act to benefit society. Later we shall observe that certain kinds of self-interest action on the part of businessmen must be curbed by government force if we are to be able to operate our industrial system continuously at full capacity; otherwise, it will not be possible to keep the primary forces of the system in balance.

CHAPTER III

TYPES OF BUSINESS CYCLES

SECTION 1

NATURE OF CYCLICAL FLUCTUATIONS

On the whole, as has been observed already, the trend of business in the past has been a highly fluctuating one. The continuity and stability of the operation of our industrial system have been interrupted intermittently for more than a century by changes in volume of sales and production, as well as by changes in prices, employment, and profits. These oscillating swings in business originated with the commercialization and industrialization of our economic system.

In the Middle Ages there were many instances of famines and disasters, but there were no business *booms* or *depressions*. Even under the domestic system, prior to the industrial revolution, the economic disturbances were more of a physical than of a business nature. Immediately after the business enterprise began to dominate our economic system, fluctuations in the business outlook became perceptible. The changes in the trend of business were at first of minor consequence, but they became more violent with the development of our industrial system. The growth of machine production and the widening of markets to national and international proportions caused a rapid increase in the number and the size of business enterprises. With this development, the phenomena of recurring business booms, crises, and depressions became more marked in character and more inclusive in extent. As a result of the unprecedented expansion of production and trade, and of the

greater use of bank credit by business enterprises, business and industrial fluctuations in the nineteenth century became more violent in character and world-wide in scope.

Because of the severe industrial and business depression in 1816-1817, following the close of the Napoleonic wars, and as a result of a business crisis in 1825, the statesmen and economists of the time became interested in studying the phenomena of business crises and depressions. Both Ricardo and Malthus devoted much time and attention to analyzing the causes which produced the downward movements in the industrial system. Sesmondi, the French economist, spent much of his life investigating the causes of business crises. Following these earlier students of business fluctuations, such men as John Stuart Mill, Stanley Jevons, and others continued a study of the problems.

In these earlier studies, crises and depressions were looked upon as isolated occurrences which interfered with normal economic progress. The main problem of inquiry concerning these downward movements was the discovery of what caused them, or the ascertainment of the forces which interfered with the normal progress of business and industry. Except for recognition of the disturbing effects of prior monetary or currency inflation, the earlier students of business fluctuations assumed that the industrial and business conditions preceding crises or depressions were "normal." There was little or no recognition of the fact that depressions grew out of unbalanced or abnormal conditions preceding them.

During the last quarter of the nineteenth century, students of crises and depressions began to recognize these downward movements as only a part or phase of a complete wavelike or cyclical movement in industry and business. They saw that a whole cyclical movement usually consisted of an upward trend (above normal) as well as a downward trend (below normal) of business. One of the earliest state-

ments of this cyclical concept was made by Frederick Engels, in his book entitled *Socialism*. His description of the business cycle was couched in the following picturesque language:

As a matter of fact, since 1825, when the first general crisis broke out, the whole industrial and commercial world, production and exchange among all civilized peoples and their more or less barbaric hangers-on, are thrown out of joint about once in every ten years. Commerce is at a standstill, the markets are glutted, products accumulate, as multitudinous as they are unsaleable, hard cash disappears, credit vanishes, factories are closed, the mass of the workers are in want of the means of subsistence; bankruptcy follows upon bankruptcy, execution upon execution. The stagnation lasts for years; productive forces and products are wasted and destroyed wholesale, until the accumulated mass of commodities finally filter off, more or less depreciated in value, until production and exchange gradually begin to move again. Little by little the pace quickens. It becomes a trot. The industrial trot breaks into a canter, the canter in turn grows into the headlong gallop of the perfect steeplechase of industry, commercial credit, and speculation, which finally, after breakneck leaps, ends where it began—in the ditch of a crisis. And so over and over again.

During the past half century, the more or less constantly recurring and alternating upward and downward swings in business have been studied as cyclical movements. In surveying them, most students recognize that the two kinds of movements do not always alternate, and that there are marked differences in each of the two kinds of swings in reference to both magnitude and duration. Most students of business fluctuations think of a business cycle as consisting of an upward movement and a succeeding downward movement of business and industry, or of a downward and a succeeding upward movement. Analysis shows that each complete business cycle has certain definite phases or periods. One of the most widely accepted concepts of the different phases or periods of a typical business cycle is that it has

four definite phases as follows: (1) the *boom*, (2) the *crisis*, (3) the *depression*, and (4) the *recovery period*.

Booms are characterized by a rapid increase in the volume of sales and production, a great rise in profits, and usually a rapid expansion of outstanding bank credit and a rise in the general price level. The chief characteristics of *crises* are a precipitant fall in prices and profits and rapid contraction of bank credit. These movements are attended by many business failures and a great shortage of loanable funds. *Depressions*, in large measure, are the continuation of crises (when crises occur first), but at a slower downward rate of movement. The outstanding characteristics of depressions are a small volume of sales and production, great unemployment, and a very low national money income. *Recovery periods* are characterized by improvements in the undesirable conditions of depressions. At that time sales, production, employment, and profits rise. Later in this chapter, a more detailed description of these cyclical phases will be given.

In a theoretically perfect cycle, the different phases may be thought of as following one another in the definite order named above. Some students, however, have gone so far as to hold that any of the four cyclical phases named above, when occurring in successive order, constitute a business cycle. They assert that it makes no difference with which phase one begins in naming the four periods of a typical cycle. They claim that one may start with a period of *depression* which would be followed by a *recovery period*; that recovery would be succeeded by a *boom*, which would be followed, in turn, by a *crisis*; and that another depression would follow the crisis and be succeeded by a new boom. This theory holds that our economic system, at all times, is going through some one of the four phases of a business cycle, and that there is no cessation of the rhythmical or wavelike fluctuating trend of business.

Those who defend this theory of continuous cyclical fluctuations claim that each phase or period of a cycle, in its very nature, develops forces and conditions which inevitably generate the succeeding phase. In short, they say that a boom breeds a crisis, that a crisis breeds a depression, that a depression breeds a recovery, and that a new recovery breeds a new boom, on *ad infinitum*. According to this theory, then, not only are fluctuations in the trend of business and industry continuous, but also each link in the wave-like trend chain generates or manufactures the succeeding link in that chain.

The above theory of causal relationships between succeeding business cycles is not accepted by the author of this book. He takes the position that each business cycle has a definite beginning and a definite ending. He recognizes that each cycle has definite phases and that the first phase develops forces and conditions which cause the occurrence of the second phase, and that the third results from the second, etc. While recognizing the interrelationships among the different phases of a particular cycle, however, he denies that the first phase of any cycle is generated or caused by forces or conditions which developed during the last phase of the cycle which preceded. In short, he denies that the last phase of any cycle generates the first phase of the succeeding one. He does not claim that similar phases always recur in the same order in different cycles, or that all cycles have the same number of phases. In short, he recognizes great differences in the character, magnitude, and intensity of different cycles. Furthermore, he recognizes that there have been times in the past when our economic system was not going through some phase of a business cycle. Lastly, he believes that destructive cyclical fluctuations are not an inherent or ineradicable characteristic of our economic system.

For purposes of study and analysis, all business cycles may be divided into two separate kinds or classes as follows: first, the Inflation-Deflation Cycle; and second, the Over-investment-Underconsumption Cycle. Each of these cycles, in typical form, has features which clearly distinguish it from the other. What are the distinguishing features of each?

As the name indicates, the outstanding feature of the inflation-deflation cycle is an inflationary rise of the general price level on the upswing in business, and a deflationary fall in the price level on the downswing. The price inflationary movement may be brought about through monetary or currency inflation, or through undue expansion of bank credit. After the inflationary movement has run its course, the deflationary movement follows, and likewise runs its course. At the end of the deflationary downward movement, there is an upswing in prices, sales, production, etc., toward a balanced business and industrial condition of operation. The first phase of such a cycle is decidedly the *boom*, with all the characteristics which will be described in detail later. A *crisis* is usually the second phase, though occasionally a *depression* succeeds the boom, and the crisis is either averted or postponed until later in the depression. Following the depression are the *recovery period* and the end of the cycle.

The overinvestment-underconsumption cycle is characterized by an expansion of the capacity of industrial production greatly in excess of the ability of consumers to purchase the consumers' goods and services which can be produced. When this occurs, new investments decline, goods pile up in the markets, prices fall, production declines, and a cumulative downward movement brings on a general depression. The period of time during which the excessive productive investments are made, of course, is the first

period or phase of this kind of cycle. It may or may not be an inflational boom period; such an occurrence can and does happen when there is no inflational rise in the general price level. It must, however, be a period of large profits for business, which, of course, may occur without an inflational price rise. We may, therefore, designate the first period of the overinvestment-underconsumption cycle as a period of *business prosperity*. The other phases of this kind of cycle follow in about the same order as the various phases of the inflation-deflation cycle follow its first phase.

A careful study of the cyclical fluctuations of the past will reveal that none of them will exactly fit either one of the typical cycles described above. Most of the larger or major cycles will be found to be a mixture of the two types, though the main characteristics of one or the other will predominate in each major cycle. We shall find also, in studying the business cycles of the past, that many of them have been interfered with and prevented from pursuing their natural courses. As a matter of fact, we shall find that each cycle of the past, in its detailed peculiarities and qualities, is different from all others. These detailed differences between various cycles, however, should not blind us to the similarities in their fundamental characteristics.

There have been many periods of time in our industrial and business history when our economic system was not passing through any perceptible period of a business cycle. Such periods have usually followed the phase of recovery of a previous cycle. At such times, our industrial and business system was more or less in balance; the trend of business was slightly oscillating upward and downward, but the swings were of small magnitude and short duration. Such oscillating trends are not of sufficient social and business significance to justify their designation as cyclical fluctuations in the sense of business cycles. (They might better be called periods of oscillating industrial equilibrium.)

Before surveying the actual business fluctuations of the past, we should have a fairly thorough knowledge of the detailed characteristics and interrelations of the various phases of the two types of business cycles mentioned above. The next section of this chapter will be devoted to such an analytical description.

SECTION 2

PHASES OF TYPICAL BUSINESS CYCLES

A. INFLATION-DEFLATION CYCLE

The typical inflation-deflation cycle has three distinct price movements: a rapid upward trend, a rapid downward trend, and a slow upward trend. The rapid upward trend is the inflationary boom period. The downward trend usually starts with a crisis and ends with a period of depression; it is the period of credit deflation. The slow upward trend is the period of recovery.

The chief characteristics of each of the four periods of the cycle are as follows:

1. Boom Period.—First, both the volume of trade and production increase, and bank loans are expanded to furnish the additional purchasing power. Prices begin to rise persistently, and the prospects for profits rapidly improve. Pessimism on the part of businessmen gives place to optimism; extreme caution in making ventures turns into confident, bold action. The replacement of obsolete capital equipment and the venturing into new industries, with new types of capital equipment, become more common. The demand for raw materials and producers' goods grows much more rapidly than the demand for consumers' goods. The prices of these goods, therefore, rise much faster than the prices of consumers' goods. New securities are placed upon the market to secure the money with which to finance expansion. The greatest expansion of equipment is in the

industries which make producers' goods. Wages rise and more laborers are employed, while the money incomes of laborers and all other classes increase. The result is an increased demand for consumers' goods, followed by rising prices.

The *boom* is on; bank credit expands rapidly; the upward movement becomes cumulative. An increase in the demand for consumers' goods and in the prices of these goods further increases the demand for producers' goods and thus advances their prices. Producers' goods and raw materials then rise rapidly in price. There is a great expansion of all industries. A shortage of skilled labor develops and wages rise rapidly, but not so rapidly as prices. New securities flood the market and the prices of shares of stocks rise precipitously with the greater prospect of profits. Caution is thrown to the winds, and speculation in land, securities, and commodities becomes the order of the day. Prices of all classes of goods rocket skyward.

Bank loans and discounts and deposits increase rapidly and reserves decrease. As the upward movement of prices and speculation continues, interest rates begin to rise. Bond prices fall, but prices of stocks continue to mount higher.

The volume of output reaches its maximum, and retail trade lags behind. Labor becomes less efficient, and labor costs rise as fast as prices, or even faster. Then, the cost of production increases faster than prices, and profits from production constantly become less. Railroad traffic sometimes becomes congested, and stocks of goods of all kinds accumulate in the channels of trade. Speculation, however, continues to boost the prices of all kinds of goods. The public vigorously protests against high prices. The money market becomes strained, interest rates rise rapidly, and loans become hard to get. Manufacturers curtail their expansion because of surplus goods and smaller prospective profits. The demand for producers' goods, then for raw

materials, and finally for consumers' goods, declines. The period of prosperity for business has ended.

2. Period of Credit Liquidation and Crisis.—Outstanding bank credit begins to be contracted, security markets "break," and prices of commodities begin to decline. The fall in prices and the decreased output of producers' goods reduce the money income of the public; it becomes impossible to obtain additional credit, and holders of goods are forced to sell. Confidence in rising prices is quickly transformed into fear that prices will decline rapidly. Prices are then precipitated downward, and the decline is much faster than the fall in the cost of production. Some industries are brought to a complete standstill and others are curtailed to part-time operation. Laborers are thrown out of employment and wages decline, but less precipitously than do prices.

The money market remains tight, and interest rates increase in spite of the effort to liquidate bank loans. Business enterprises in great numbers fail and bring about great losses to their creditors. At this point, a veritable crisis develops; fear grips the people; trade is reduced to bare necessities. The crisis is of comparatively short duration—never more than a few months. The reduction of output and the partial liquidation of stocks of goods decrease bank loans and discounts, and the money market is improved. The weaker business enterprises are forced into receiverships, and others are forced to write down their inflated capital values and take their losses.

Panics are simply aspects of intensified crisis, but they do not occur with each crisis. The word *panic* carries with it the connotation of lack of reason—action based upon emotion or instinct. The individual who is in a panicky condition has little control over his acts. The word as applied to business conditions means that businessmen and the public in general have become so excited over a business crisis that they act in an unreasoning manner with particular

reference to money and credit. Panics are evidenced by runs on banks, by denial of credit by banks to business organizations which are deserving of credit, and by exorbitant interest rates. Business may go through a crisis without a consequent panic. Panics simply intensify business crises, and they are largely due to defective systems and policies of banking and credit.

Prices of the different classes of commodities do not decline proportionately. Raw materials, such as metals and agricultural products, decline more rapidly and to a greater extent than do other classes of goods. Producers' goods decline more in price than do consumers' goods. Wholesale prices decline more rapidly and to a greater extent than do retail prices. The volume of trade in raw materials and producers' goods shrinks materially as industries remain curtailed. The cost of production, particularly the labor and capital cost, does not go down proportionately with prices. The entire value and price system is upset. Timidity, pessimism, and fear become general among businessmen.

3. Period of Depression.—The credit liquidation and crisis period is the first segment of the great downswing in the inflation-deflation cycle. The *depression period* is the second segment of this downswing. During the depression, the general level of prices continues to decline, but the decline is gradual. The rapid decrease in prices of raw materials will stop soon after the depression sets in; wholesale prices of consumers' goods will also cease their rapid decline; retail prices will continue slowly downward until the end of the depression. The volume of trade continues small, and industries remain closed or operate on part time. Unemployment continues to increase. The great surplus stocks of goods are gradually worked off, since consumption remains greater than production.

Wages are gradually decreased. Capital costs are reduced as a result of writing down values of capital equipment and

renewing loans at smaller interest rates. Business undertakings are managed with more care, and managerial costs are reduced. Eventually, the whole cost of production is decreased to a point where goods can be produced at a low price level. As this is done, profits reappear and industries stop reducing their outputs.

As the depression progresses, the financial situation greatly improves. There are bank failures (due to conditions brought about during the crisis), and loans and discounts decrease; deposits, at first, continue to decrease; and reserves increase. Interest rates on commercial and investment paper are greatly decreased, and money becomes easy. The prices of bonds go up, but shares of stocks remain depressed.

The depressed condition of trade, however, continues as long as large surplus stocks of goods remain to be used. New ventures and new expansions are not undertaken because of the small prospects of profits and the lack of confidence. As there develops a shortage of certain classes of goods, their prices will go up. The general price movement is "spotted" and uncertain. But the general price level eventually begins a gradual rise.

4. Period of Recovery.—As prices increase haltingly and slowly during a period of recovery, the prices of raw materials increase more rapidly than those of finished manufactured goods; the prices of producers' goods rise faster than those of consumers' goods; and wholesale prices climb faster than retail prices. The differences in price movements of the several classes of commodities may be looked upon as a continuation of the readjustment of price and value harmonies which began in the period of depression.

Prices increase, of course, as a result of an increase in the demand for goods. This increase in the demand for goods results in a growing volume of trade, as evidenced by an expansion in the volume of railroad traffic, by large bank clearings, and by other business indices. With improved

prices and an increased volume of trade comes a swelling in the volume of production or output. Factories which have been operating on part time during the preceding depression find it profitable to operate on full time. Unemployment of labor decreases as production and trade increase. At first, wages do not rise with the improvement in prices, but if the price and trade improvement continues upward, wages increase slightly.

When a period of recovery begins, the banking situation is very favorable for business. Bank loans and discounts are small, bank deposits are small but increasing, and bank reserves are high. This situation is created during the previous period of depression. Interest rates are very low and loans are therefore cheap and comparatively easy to secure. As the volume of trade, production, and prices slowly increases, loans and discounts also increase slightly, but interest rates do not rise. There is at first little activity in the security markets; bond prices are high, but stock prices are low. As the outlook for profits improves, however, stock prices rise, and there is an increase in the volume of securities bought and sold.

As recovery progresses, our industrial system approaches a balance in its operation. Little or no bank credit is used to supplement the national income in purchasing finished goods. Net production, national money income, and the purchase of finished goods tend to equal one another. Industry tends to operate at a reasonably full capacity.

B. OVERINVESTMENT-UNDERCONSUMPTION CYCLE

As previously stated, the typical overinvestment-underconsumption cycle does not have a boom of rapidly rising prices as does the inflation-deflation cycle. In order for the overinvestments to occur, however, the first period of the cycle must be one of business prosperity in the sense of a

large volume of trade and production and high profits. Neither is this type of cycle so likely to have a sharp business crisis at the end of the period of prosperity as the inflation-deflation cycle is likely to have at the end of the boom. The overinvestment-underconsumption cycle, however, will have a period of depression subsequent to its period of business prosperity. The depression of this cycle will be marked by declining sales and production, as well as by falling prices, unemployment, and other characteristics of depression periods. After the depression has run its course, a recovery period will follow.

1. Period of Business Prosperity.—The business prosperity period of the overinvestment-underconsumption cycle is one in which either too large a portion of the current money income is saved and used to increase the productive capacity of industrial enterprises, or too large a portion is loaned to individuals and governments for use in purchasing consumption goods and services. At that time, too small a portion of the current national money income, as a whole, is used directly by the receivers to purchase consumers' goods and services. It is a period in which the capacity of the industrial system to produce finished consumers' goods and services grows much faster than the purchasing power of the money income of the mass of consumers.

The period of relative overexpansion in the productive capacity of the consumption goods industries must be a profitable one for business. The volume of production and trade must be high; that of new building and construction must be large; the income of those who make the large investments in productive enterprises must be great. Business may be very profitable, of course, without having a rising price level. Higher profits may come both from a larger volume of trade and from a decreasing cost of production. If technological improvements in methods of production cause the cost of production to decrease, while the

prices of the products do not decline proportionally, profits will increase.

During this period, a market surplus quantity of consumers' goods and services will accumulate in the nation's stores and warehouses. The point of saturation of consumption loans (installment sales) will be reached when borrowers are unable to make additional regular installment payments. Factories must curtail their production when they are unable to sell, at prevailing prices, all the products they are producing. It is financially unsafe for them to continue to accumulate additional stocks of unsold goods. As a result of the curtailed output of consumers' goods industries, the producers' goods industries are faced with a declining market for their products; the latter find it necessary, consequently, to reduce their own output. Additional investment in an industry, or further expansion of it, therefore becomes unprofitable. When the flow of new industrial investments stops, the volume of trade slumps and prices begin to fall. This is the beginning of the cumulative downward movement of the next phase of the cycle—the depression.

2. Period of Depression.—It has been noted above that a depression immediately follows the period of business prosperity. Though a crisis may occur during the course of the depression, the downward movement does not commence with a crisis. The curtailed sales and production and the falling prices result in contraction of the outstanding bank credit as in depression periods of the other type of cycle. Business failures and unemployment may reach great magnitude because of the small volume of production and sales, and the low prices. All the main occurrences in this type of depression are quite similar to the main ones in the depression of the inflation-deflation cycle. (The principal difference is the fact that the depression of the overinvestment-underconsumption cycle begins more slowly and is likely to last longer than the depression of the other type of cycle.)

3. Recovery Period.—Recovery from such a depression is likely to move slowly and haltingly. To secure any recovery, it is necessary, of course, to use up most of the surplus stocks of goods which existed when the depression started. Because of the surplus capacity of production existing in the established consumers' goods industries, it is not possible to speed recovery by further expansion of those industries. Recovery must depend, therefore, largely upon the expansion of demand for consumers' goods. Replacement of worn and obsolete capital equipment in all industries will render valuable aid in the recovery movement. In another chapter of this book, the problems of recovery from such a depression will be discussed in detail.

As suggested already, none of the business cycles of the past has conformed in every detail to either of the typical cycles described above. The chief characteristics of the earlier cycles in this country were decidedly the inflation-deflation type, while our cycles since the beginning of this century have had many of the features of the overinvestment-underconsumption type. As we shall learn later, inflation-deflation fluctuations are usually characteristic of young and developing industrial systems. Overinvestment-underconsumption fluctuations, on the other hand, are results of the operation of more or less mature or fully developed industrial systems. The next section of this chapter gives a brief survey of the business and industrial fluctuations of the past.

SECTION 3

BUSINESS CYCLES OF THE PAST

Attention has already been called to the fact that the aspect of the business cycle which first attracted the attention of the public was the crisis period. Largely for this reason, cycles are measured by historians from one crisis period to the next. The intervening phases of the business cycles were at first entirely ignored. Gradually the period

of depression following the crisis attracted the attention of economists and historians; later they recognized the periods of "prosperity" preceding the crisis. In giving an account of the early cyclical movements, therefore, we are able only to record the time at which crises have occurred. Only during the last half century have the other phases of cycles been the subjects of detailed study and analysis.

The first financial and business crisis of significance occurred in 1720. This crisis affected both England and France. It was precipitated in England by the failure of the Bubble companies, organized for the purpose of taking over the national debt and for carrying on trade with the Spanish colonies in America and the West Indies. Partly because of the support which high government officials gave these South Sea companies, as they were called, there was feverish speculation in their shares of stock, and extensive financial failures occurred as a result of their collapse in 1720. A somewhat similar scheme in France, promoted by John Law under the name of the Mississippi Company, came to failure the same year as the collapse of the Bubble companies in England. In both countries, these two disasters were more financial than commercial in their results. Many personal fortunes were lost on both sides of the Channel, but the interference with business was only slight and temporary, and the fiasco was soon forgotten by the business world.

Following the close of the Seven Years' War in Europe in 1763, England suffered a slight financial crisis, but it proved to be only a flurry and did not develop into a business depression. There were minor business disturbances in 1772 and in 1783, the latter disturbance following the close of the war with the American colonies. Again in 1793, at the beginning of the war with France, England suffered a political crisis and a perceptible business depression, but this condition lasted for only a short time. Then in 1811, partly because of the nonintercourse trade acts of the United States, Eng-

land suffered the most severe and extensive business crisis she had experienced up to this time. Her exports fell off more than one third, and many of her industries suspended operations. Laborers were thrown out of work and pauperism greatly increased.

In 1817, following the close of the War of 1812, the United States experienced its first real business crisis and depression. The American markets were flooded with English goods at low prices, and many of the new American manufacturing industries were forced to close their plants for lack of a market. Many of the state banks, because of their inability to liquidate their loans, were forced to close their doors in 1817 and 1818. There was a credit stringency and a real business depression for a year or more. There was also an important credit and business liquidation in Europe at this time.

In 1825, England experienced a marked business depression, brought about by a fall in the price level. This drop in prices was due partly to the appreciation of the paper currency then in circulation. This crisis was not severe outside England, although business was considerably disturbed in the United States.

The following years have been designated as crisis years in one or more of the Western nations: 1837, 1839, 1847, 1857, 1860, 1866, 1873, 1882, 1884, 1889, 1890, 1893, 1900, 1903, 1907, 1910, 1914, and 1920. The crisis of 1837 was the first international crisis. This disturbance started in the United States in 1837, then spread to England, and finally to France. Again in 1839, business in the United States suffered reverses. The next world business crisis was in 1847, and was more intense in England than in any other country. In 1857, the United States underwent a business crisis which was largely confined to this country, and again in 1860, at the beginning of the Civil War, there was a short interruption of business. In 1866, England experienced a

sharp business crisis which was short-lived and affected only slightly the business of other countries. The third international crisis was that of 1873, which apparently originated in Austria, became intense in the United States, affected England and Germany to a considerable degree, but made only slight inroads in France.

In January, 1882, France felt a crisis, first evidenced by the rapid liquidation of speculative securities on the stock exchange. This disturbance seems to have been principally financial in nature, and extended only to Vienna. In 1884, the United States experienced a business crisis followed by a year of depression. This disturbance seems to have been confined almost entirely to the United States. In March, 1889, France experienced another crisis, precipitated by the failure of the Société de Métaux, or copper ring, which brought in its wake the failure of one of the biggest private banks in France.

The next crisis was that of 1890, which started in England in November with the failure of Baring Brothers and Company, one of the greatest private banking houses in London. This financial disturbance did not appear to bring about an immediately perceptible business crisis, but it was followed in 1891 by a marked business depression in England. The English business depression of 1891 spread to the other European countries, just as the financial disturbances spread to those countries. The English crisis of 1890 was followed in the United States during the first part of 1891 by business liquidation, which was stopped in the fall of the year as a result of large grain crops in this country and poor crops in Europe.

In May, 1893, the United States experienced its most severe crisis up to that time. This crisis spread to England and Germany only by increasing the severity of the business depression which those countries had been experiencing since the crisis of 1890.

The period of business depression following the European panic of 1890 and the American panic of 1893 was of long duration. Nowhere did revival set in before 1895. Revival started in Germany early in that year, then spread to England, and finally to France. Revival did not come about in the United States until 1897, but progressed rapidly in England and in the United States. A halt in the upward trend of business in all the countries came in 1900. Favorable business conditions came to a halt in France in 1900, though with less suddenness than in England. Continuity of business in the United States, which had started in 1897, was only slightly interrupted in 1900 by the German panic. Securities on the stock exchanges began to decline in the United States in 1900, however, and continued to decline until the beginning of 1904. Money became so tight in New York and other financial centers in 1903 that a rapid liquidation of securities resulted in the movement known as the "rich man's panic." This was followed by retardation of production in the iron and steel industries and a slight decline in the prices of raw materials. This mild business depression continued in the United States throughout 1904. Business in the European countries remained in a depressed condition from 1900 until the end of 1904. Revival and business prosperity came about in both Europe and America in 1905-1906.

Before the end of 1906, the prices of industrial stocks began to recede both in New York and in London. Industrial stocks declined in Germany in the early spring, and in the United States and England prices of such raw materials as iron and copper began to decline. Before the end of the summer of 1907, the general price level in all European countries and in America was on the decline, with the movement most marked in the United States. In October, 1907, a severe panic broke out in the United States, but the crisis did not develop into a panic in Europe, even though liquida-

tion was hastened in those countries. There was depression in all countries in 1908, although in the United States and in France business began to pick up before the end of the year. Depression continued in England and Germany until the fall of 1909. During the year 1910, revival continued in England and Germany, but in the United States and France revival lapsed back into depression. France saw a slight improvement in business in 1911, and revival continued in both England and Germany. But improvement did not appear again in the United States until the fall of 1912, and then it was short-lived, for another setback came in the fall of 1913. Business in the United States did not revive again until 1915.

The opening of the World War in August, 1914, brought an immediate business crisis in the United States, and to a lesser degree in all the European countries. Because of the stimulation of great war orders, business quickly revived in Europe, but due to the German raiders on the high seas and the heavy sales of foreign-held American securities on the American market, business in the United States did not begin to revive until about the end of the year. In 1915, the United States entered upon a period of rapid recovery which, because of the heavy war demands of the European nations, changed almost immediately into a boom. Measured in terms of high prices and great profits, all countries of the world enjoyed "prosperity" during the war. There was a slight recession of business following the Armistice, in November, 1918. This recession was overcome before the late spring of 1919, and prosperity continued in an intensified form all over the world until the great crisis of 1920.

The most rapid decline in the general price level ever experienced by this country occurred in the fall and winter of 1920. At that time, there was also a rapid liquidation of bank credit and the attendant consequences of reduced sales and production, as well as business losses and failures, unemployment, and a greatly reduced national income.

This business crisis and the succeeding depression were of short duration. In the fall of 1921, business began to "pick up," and a rapid recovery of business and industry followed. By the fall of 1922, the recovery of business had progressed to the stage of business prosperity.

With the exception of a slight recession of business in 1924-1925, from 1922 to 1929 was one of the most intense periods of peacetime business prosperity this country has ever experienced. While the general price level did not rise during this time, and there was little expansion of commercial bank credit, the volume of sales and production increased more rapidly during the same period of time than ever before in peace times. The agricultural industry was depressed in the twenties because of the relatively low prices of farm products, but business and industry, in general, were highly profitable. This intense business prosperity period continued until 1929, and was followed by the most severe depression this country had ever experienced in its history.

All the western European countries suffered a severe crisis and depression in 1920. Indeed, the depression was worldwide; it was just as severe in Japan and India as in any of the other countries. The various European countries did not experience a strong revival of business and industry following the 1920 decline. On the contrary, they suffered from war exhaustion and monetary and credit disturbances caused by inflation during the war. England had a business depression from 1920 to 1929, and then her long depression became worse because of the new depression in the United States.

From 1929 to 1933, the whole industrial and business world experienced a prolonged depression. In 1931, as a result of new governmental policies, there were signs of some business recovery in England. In 1933, business began to improve in the United States after the adoption of some new governmental monetary and economic policies. But there was no rapid revival of business and industry in any of the countries up to 1936.

CHAPTER IV

QUANTITATIVE MEASUREMENTS OF FLUCTUATIONS

SECTION 1

USES OF STATISTICAL DATA IN MEASUREMENTS

Statistical method furnishes the handle by which we are able to take hold of the complex phenomena which make up a business cycle and analyze them for a more thorough understanding. Through quantitative measurements, statistical description gives much greater definiteness than is obtainable through terms of general comparison. Then, too, it brings to light positional relationships between the several variables which, without its use, would pass unnoticed. In the course of a business cycle, an increase or a diminution in the magnitude of a price or a volume is not isolated or sporadic, but is related to the actual or potential changes of a large number of other magnitudes. The chronology of the different movements, upward or downward, and the amplitude of fluctuation of each element, as compared with that of each other element, are second in importance only to the fundamental facts of the movements themselves.

Statistical materials pertaining to business cycles are in time series which show, at regular intervals, the magnitude of the particular variable at a number of points in the period under investigation. The figures which give the most accurate picture of what takes place are those in series of short-term intervals. Thus monthly or quarterly index numbers are better than annual averages for this purpose.

(An unrefined time series extending through one or more business cycles may contain four quite distinct movements, which differ greatly as to both cause and effect. These are

commonly known as secular trend, cyclical movements, seasonal variations, and random fluctuations.

The first of these, the secular trend, is the growth element. It is a gradual and consistent rise or fall over a long period of time. For example, the secular trend of commodity prices in the United States between 1873 and 1896 was downward. From 1897 to 1920 it was upward. It is a movement which occurs independently, and it would take place even if there were no cyclical changes or seasonal differences and if the industrial system were in a condition of perpetual equilibrium. Many time series have little or no secular trend. No adjustment for secular trend is made in any of the series used in this chapter.

Seasonal variations are those regularly recurring changes in industry or business which are coincident with the regularly recurring changes in the seasons. They occur within each year, and at the same points in each year. The traditional seasonal variation in the volume of retail trade is an example. Many of the statistical data used in this book have been corrected for seasonal variations.

Random fluctuations are changes in a series which are quite distinct from the secular trend and which have no connection with seasonal or cyclical influences. They may occur at any time and under any circumstances. They may be the result of an accident or of deliberate intent. Thus a series of the volume of coal production may be temporarily affected by an explosion in an important mine or by a miners' strike.

In order to see clearly the purely cyclical movements contained in a time series, it is often necessary to eliminate from the series either the secular trend or the seasonal fluctuations. Occasionally, furthermore, it is advisable to eliminate both these factors. The mathematical procedure by which these extraneous elements are ascertained, segregated, and removed from the series is a special technique, exposition of which has

no place in this treatise.¹ The knowledge that it has been done, and that the cyclical movements themselves are brought into relief in the series, is sufficient. Random fluctuations are so widely scattered and of such irregular occurrence that their discovery and elimination are a practical impossibility.

The charts and tables found in the appendices of this book are given only for the purpose of illustrating some of the processes of business cycles. They are mere compilations of the data assembled by various trade and government agencies. Only such series as are concerned with principal movements are utilized in this descriptive treatment.

Statistics useful in measuring business fluctuations and in analyzing the interrelations of economic movements, as already indicated, are available on many aspects of national economic activity. Especially since the World War, the national and state governments, as well as private agencies, have expanded their activities in the gathering and preparation of statistics on industrial and business activities. Some of the principal series covering the seventeen years following the war (1919 to 1935) will be used in the sections of this chapter. Those used constitute only a part of the total mass of quantitative information now available.

It might be assumed that by use of the available mass of statistical material almost any economic movement (especially changes in prices, production, and trade) could be measured and analyzed accurately. This is not the case, however; the use of statistics in measuring various aspects of business cycles is subject to three important limitations.

(The first of these limitations is that there are many fluctuations of factors and forces for which quantitative data are not available.) This often prevents accurate measurement of all aspects of a general economic movement. For example, the

¹ Warren M. Persons' *Indices of General Business Conditions* is a good book on mathematical technique.

volume of retail trade from month to month, significant as this movement is, can be estimated only from the sales index of a sample group of department stores, supplemented with other miscellaneous and fragmentary information. For this reason, fluctuations in the volume of trade are not fully known. Little or no accurate current statistical information is available on either the personal or the functional distribution of the national money income. The available statistics on current wages and profits are mere fragmentary estimates.

A second limitation upon the use of available statistical data arises from the methods employed in calculating and presenting the various series. For example, what prices are to be used in constructing an index of prices? Will the index show the course of wholesale or retail prices? If it is an index of commodity prices, it will not show changes in the prices of real estate, securities, professional services, and labor, which are also purchased. With reference to many economic activities it is difficult, if not impossible, to secure sample figures which are truly representative of those activities. Yet many of the statistical series used as measurements of various business and industrial activities are composed of meager sample figures.

The third and chief limitation upon the use of statistics in measuring economic movements is that a particular statistical series, though accurate, shows nothing but an isolated fact. The real significance of any statistical fact depends upon its interpretation in relation to other facts and figures. No one statistical series constitutes evidence from which final conclusions may be drawn. For example, prices may remain unchanged over the course of five years. This fact, shown by a price index, reveals little or nothing in itself. It is significant only when it is interpreted in its relation to other factors, such as the volume of production, sales, and profits.

Statistical series are not rendered useless because of the limitations upon their uses. On the contrary, many of them

are highly useful, and most of them are quite reliable, when their limitations are fully recognized. The only method by which we are able quantitatively to measure fluctuations in the trend of business is through statistics on various industrial, financial, and economic activities of the nation. For this reason, there should be improvements in the variety, scope, and accuracy of available statistical series used for purposes of measuring business trends.

Not only are statistical series subject to definite limitations in their uses in measuring fluctuations in the trend of business, but the problem of accurate measurement of particular fluctuations in the trend of business is made difficult because each cyclical fluctuation is different, in many respects, from all others. Each cycle differs from all others both in peculiar characteristics and in combination of events. As already pointed out, however, there are many similarities in corresponding phases of different cycles. An illustration will indicate how a particular phase of a cycle may differ from the corresponding one of a previous cycle in sequence and combination of events. The business prosperity period from 1922 to 1929 was not characterized by a shortage of labor, a market shortage of commodities, or a rise in commodity prices. All these developments, with the possible exception of a rise in prices, were typical characteristics of previous periods of business prosperity. Yet there were other movements during the twenties which were typical of previous booms. There was a great rise in production, sales, and profits; there was a speculative rise in prices of securities; and there was intense building activity.

[Pertinent questions which may be asked regarding the measurement of business cycles are: When do the various phases of a cycle begin, and when do they end? How can we determine the intensity and the magnitude of any phase of a cycle?]

As to the first question, it is usually possible to date a crisis as occurring within a period of one or two months. The stock-market crash of 1929 occurred in October, although it had a small beginning in September. The fall in prices which marked the crisis of 1920 occurred in August, 1920. But other phases of the cycle frequently cannot be given a specific date of beginning or ending. It is possible to say that an improvement in a combination of measurable factors indicated recovery during the last of 1921, but the exact date of the recovery's beginning can hardly be stated. The reason for this situation is that the various measurable factors did not change uniformly and simultaneously. There were lags and advance movements of various factors, which arose from innumerable circumstances of the time.

The question of how to determine the magnitude and the intensity of a particular phase of a cycle is also a troublesome one. An answer to the question, furthermore, is extremely difficult, if not impossible, if one assumes a "norm" of business conditions against which fluctuations are to be measured. Except for the use of some kind of average, there is no statistical method by which "normal" business conditions can be ascertained. From the analytical point of view, an average of a fluctuating trend does not represent what is conceived to be a normal operation of the industrial system.

Each phase of a cyclical fluctuation, of course, is made up of a combination of the movements of many factors. Subject to the limitations of statistical methods, changes in many of the factors can be measured. But a measure of the composite movements of all of them would have little meaning. This statement is true, first, because a composite is an *average*; it is true, secondly, because the nature of the fluctuations of all measurable factors differs in the corresponding phase (say, a depression) of each cycle. Com-

posite pictures of two booms, or of two depressions, would not be very similar in appearance. The interrelationships of the changes in the various measurable factors during each phase of a business cycle must be studied individually, if the intensity and magnitude of all phases of a particular cycle are to be determined.

In so far as the mechanics of statistics are concerned, however, a composite index of business activity can easily be constructed. An index of this kind may have an element of value in pointing out roughly the extent of decline in business conditions from the high point of a boom to the low point of a depression. Such an index is graphically presented in Chart XIII.¹ It is calculated as the weighted arithmetic mean of the following indices: industrial production, debits to individual accounts, wholesale prices, loans of reporting member banks, investments of reporting member banks, and common-stock prices. Of these series, the indices of debits to individual accounts and industrial production are seasonally adjusted. Each of these series has a weight of one, except the indices of bank loans and bank investments, which have weights of one-half each.

This chart shows the beginnings of the crises of 1920 and 1929 to have been August and October, respectively. It indicates the slight recessions of 1924 and 1927, and the rise and fall of business activity during periods of booms, liquidations, and recoveries. Any index of the business trend is intended to reflect changes in production and employment, trade, prices, the supply of credit, speculation, and investments. The rise in business activity following 1933, as shown by this index, was due in part to government spending, and is emphasized by the inclusion of bank investments in the composite index. Government spending for relief and other purposes was largely financed by the sale of bonds and notes to banks.

¹ See p. 277.

While this composite chart clearly indicates the turning points of different cyclical fluctuations in business, it does not indicate the cumulative development of overinvestment and underconsumption from 1922 to 1929. Partly for this reason, its accuracy in measuring the nature of cyclical fluctuations during this period is not satisfactory. Because of constant changes in the relationships of the various economic factors involved in the operation of our economic system, no composite chart can give a true picture of business fluctuations for any given period of time. Neither can any statistical chart portray the damages wrought by business cycles to the economic system or to public welfare.

The years from 1922 to 1929 were profitable years for most businesses. Yet the burden of paying debts contracted during the war boom, and the losses from financial readjustment following the crisis and depression of 1920 and 1921, absorbed the profits of many small businesses during these years. The large number of people engaged in agriculture, moreover, experienced no prosperity during the twenties. They suffered from a relative overproduction in that industry. Because of increasing unemployment and stationary wage scales, the wage-earning classes experienced little prosperity during the twenties.

Business, in general, then, may be active and profitable, and at the same time large groups of the population may enjoy but a low scale of economic welfare. Such a situation arises from great inequality in the distribution of the national income. Furthermore, that kind of prosperous business may continue for some time, despite a growing inequality in the division of the national income. Finally, however, there must be a general recession and readjustment of business and industry. A business readjustment must occur eventually, because our industrial system cannot forever produce more finished goods than the money incomes of the mass of consumers are able to buy.

SECTION 2**SOURCES AND NATURE OF AVAILABLE STATISTICS**

For purposes of measuring business and industrial fluctuations, statistics having to do with the operations of our economic system may be divided into four classes, namely: (1) those which refer to production, trade, prices, and consumption; (2) those which give information in regard to bank credit conditions; (3) those which have to do with the distribution of the national money income; and (4) those which indicate the current volume of savings and industrial investments. In making a study of inflation-deflation cyclical movements, intensive use is made of the first two classes of statistics. Each of the four classes is valuable in analyzing the overinvestment-underconsumption fluctuations, but information contained in classes (3) and (4) is indispensable to a study of this type of fluctuation.

Stability in the industrial system, as discussed in the second section of Chapter II, requires the maintenance of a balance between production and the flow of finished goods and services on the one hand, and the flow of the national money income on the other. One of the important problems in the measurement of business trends is to recognize and determine the extent of changes which disturb this balance. Changes in the production and the flow of goods through the markets can be measured by analyzing statistics on the volume of production, trade, and consumption, and the course of prices at which exchanges are made. The purposes of such an analysis are as follows: (1) to ascertain whether raw materials are regularly passing through the processes of manufacture; (2) to discover whether finished goods are being distributed without interruption through trade; and (3) to determine whether consumers are purchasing the current output of finished goods and services.

Numerous statistical series are available for use in measuring fluctuations in production. The Federal Reserve indices

of production in the manufacturing and mineral industries¹ furnish valuable data for measuring changes in the volume of industrial production. These indices are calculated from sample statistics representing a number of industries. The manufacturing industries include, among others, automobiles, iron and steel, leather and shoes, textiles, and tobacco. Some of the industries represented in the index of mineral production are coal, iron ore, lead, zinc, and petroleum. The monthly indices are adjusted to remove the seasonal influence so that the resulting series show cyclical fluctuations and secular trend. The trend of production in individual industries, naturally enough, is merged into the general index of industrial production.

The above-described index is not designed to compare the production of consumers' and capital goods, nor does it represent the trend of other kinds of production, such as agriculture and construction. Additional statistics are necessary, therefore, for the further analysis of general production. Among other statistics on production are those of the Department of Agriculture on the production of crops and livestock, and those of the F. W. Dodge Corporation on the monthly volume of contracts awarded for residential and nonresidential construction.² The above enumerated indices by no means constitute a complete list of available measures of production, but they indicate the general character of such data.

There are no comprehensive series which may be used to measure the volume of trade directly. Resort must be made to statistics which indirectly indicate the amount of exchange of goods and services. Among the indirect measures are figures on debits to individual accounts³ and freight carloadings.⁴ The debits to individual accounts consist of the

¹ See Chart I, p. 265.

² See Table I, p. 278.

³ See Chart II, p. 266.

⁴ Compiled and released weekly by the Association of American Railroads, Washington, D. C.

monthly volume of checks charged to individual accounts (distinguished from bank accounts) as reported by a group of member banks of the Federal Reserve System. Debits to individual accounts really measure the volume of all kinds of transactions, including speculative or investment transactions, as well as exchanges of goods and services. The volume of debits reported by banks in New York City amounts to about half the volume for the United States as a whole. Debits reported from all cities other than New York are usually accepted as a better index of trade than the total volume for the country. It is known that a great part of the New York City debits represent financial transactions rather than commercial ones. Freight carloadings show the number of freight cars of grain, livestock, coal, coke, forest products, merchandise of less-than-carload shipments, and miscellaneous freight loaded each week. This measure is, of course, one of volume or weight, and not of pecuniary value.

While debits to individual accounts and freight carloadings tell something of the course of manufacturing and wholesale trade, they do not reflect the variations in the volume of retail trade. To supply the need of a measure of retail trade, the Board of Governors of the Federal Reserve System publishes an index of department-store sales.¹ The representativeness of the sample data upon which this index is based, and the soundness of the statistical method used in constructing it, cannot be seriously questioned. The index, however, shows fluctuations in the sales of only one kind of store, which, according to the 1933 Census of Distribution, accounted for about one-tenth of all the retail sales. This index is now supplemented by the Bureau of Foreign and Domestic Commerce index of passenger-car sales, but the latter index does not extend back of the year 1929.

Much information on current consumption of raw materials by certain industries is assembled by government and

¹ See Chart III, p. 267.

private agencies. The Bureau of Mines gathers figures on crude oil run to stills at refineries, and the Bureau of the Census assembles statistics on cotton "consumed" by spinners. The Bureau of the Census also publishes an index on commodity stocks which is useful in determining how rapidly goods produced (principally raw materials) are used in the process of manufacture.¹ But there is no comprehensive or reliable statistical series on the rate of consumption of goods and services by the people, although the index of sales by department stores gives some information on purchases by ultimate users.

Prices at which exchanges are made constitute an important part of the general mechanism of production, trade, and consumption. Changes in prices are the main guide to immediate productive, consumptive, and trading activities. A change in prices may throw the national money income out of balance with the value of net industrial production, and thereby disturb the flow of finished consumers' goods and capital goods. Because of the importance of prices in commercial activities price statistics are widely used as indicators of business conditions.

The Bureau of Labor Statistics publishes an index of wholesale commodity prices,² and another on the retail cost of food.³ The wholesale price index reflects changes in the composite price of farm products, foods, cloths and clothing, fuel, metals, building materials, chemicals, and many other individual commodities. It should be remembered that changes in the value of money are not fully measured by changes in the index of wholesale commodity prices. This is true because money is used to purchase real estate, labor, bonds, and numerous other things besides commodities represented by the wholesale price index.

¹ See Chart IV, p. 268.

² See Chart V, p. 269.

³ See Chart VI, p. 270.

The supply and use of bank credit is related to stable industrial and business conditions, because the continuity in the flow of goods and services from producers to consumers is frequently disturbed by the erratic use of bank credit. As a result of either expansion or contraction of outstanding bank credit, increases or decreases in the current purchasing power of the national money income are brought about. Borrowers usually accept the proceeds of loans from banks as "credits" to their demand deposit accounts. A very large proportion of the demand deposits of banks, therefore, originates as a result of loans by them. The amount which banks can lend depends upon the amount of reserves available to support the additional deposits that result from the new loans. If reserves are greatly in excess of the amount required to support existing deposits, then banks can make additional loans, and are usually eager to do so.

Two classes of banking operations related to the current purchasing power of the nation may be measured by available statistics. First, there are figures which show changes in the loans, deposits, and reserves of commercial banks. These data indicate current additions or subtractions in the amount of spendable funds used by the nation. Second, statistics of current operation and conditions of the Federal Reserve Banks are also available. These figures indicate the extent and use of the "reserve" banking power of our national banking system.

From the standpoint of banking statistics, there are three groups of commercial banks: (1) all banks in the United States; (2) member banks of the Federal Reserve System; and (3) reporting member banks of the Federal Reserve System. Figures on the conditions of all banks are compiled from special reports made by the national and state officials who administer banking laws.¹ Reports of the Board of Governors of the Federal Reserve System each month give

¹ See Table II, p. 279.

figures on the reserves of member banks.¹ The most current information on commercial banking is supplied weekly by a group of member banks located in 101 principal cities of the United States. Figures on the conditions—loans,² investments,³ time deposits,⁴ demand deposits,⁵ reserves,⁶ and other items—of reporting member banks are published by the Board of Governors of the Federal Reserve System. Reporting member banks include only a minority of all the banks in the country, but both their loans and deposits amount to more than half of the total for all banks.

The amount of reserves held by all banks (including the Federal Reserve Banks) is influenced by numerous factors. The principal factors determining them are: (1) the monetary gold stock of the country; (2) the amount of bank loans outstanding; (3) the amount of cash and deposits kept by the United States Treasury; and (4) the amount of outstanding Reserve credit from the point of view of credit control. Outstanding bank loans and Federal Reserve credit in use are the most important factors. One of the main functions of the Governors of the Federal Reserve System is to regulate the amount of outstanding bank credit with the ends in view of maintaining sound banking conditions and keeping the proper relation of bank credits to production and consumption of goods and services.

A statement of the condition of the Federal Reserve Banks, together with a tabular statement of the factors which determine the reserves of member banks, is published each Wednesday.⁷ This statement, as far as the conditions of the Federal Reserve Banks are concerned, shows the amount

¹ See Chart X, p. 274.

² See Chart VII, p. 271.

³ See Chart VIII, p. 272.

⁴ See Chart IX, p. 273.

⁵ See Chart IX, p. 273.

⁶ Included in the reserves of all member banks in Chart X, p. 274.

⁷ See Chart X, p. 274.

of Federal Reserve credit outstanding in the form of bills bought or discounted, the amount of governmental obligations owned, member bank reserves held, the amount of cash reserves, capital stock and surplus, and other items. The statement is designed to show changes in banking reserves, and changes in the factors which determine the size of these reserves. It is especially significant in indicating the policy of credit control the Federal Reserve Banks and the Board of Governors of the Federal Reserve System are actually following.

Changes in either the functional or the personal distribution of the national money income are important, in that they determine the relative ability of different groups to buy the output of finished goods and services currently produced by industry. Our knowledge of the personal distribution of the national money income is based principally upon income tax statistics.¹ The Commissioner of Internal Revenue publishes the number of income tax returns and the incomes reported according to the size of individual income. The personal incomes of the majority of the population, who make no income tax returns, are unknown except for estimates. The total annual national income and its functional distribution have been estimated by W. I. King, of the National Bureau of Economic Research,² and by the Bureau of Foreign and Domestic Commerce.³

Some current information on functional distribution—that is, incomes paid out as wages, interest, rents, and profits—is furnished by indices of employment and payrolls.⁴

¹ See Table III, p. 280.

² W. I. King, *The National Income and Its Purchasing Power*, p. 74.

³ *National Income, 1929-1932*, Senate Document No. 124, 73d Congress, 2d Session, p. 10.

⁴ See Chart XI, p. 275. Indices of employment and payrolls shown in Chart XI are adjusted for the decline in the number of persons employed in manufacturing industries during the years 1919 to 1935. This adjustment causes these indices to show greater employment and payrolls than they would represent without such adjustment. The calculation of the indices is described in Bureau of Labor Statistics Bulletin No. 610, *Revised Indexes of Factory Employment and Payrolls for 1933*.

Additional information on this subject can be obtained from figures on interest payments, business profits, and prices of shares of stock.¹

The amount of current savings and investments depends upon a great number of factors. Both savings and investments vary with the volume of production and sales, with price changes, and with changes in both the amount and the personal distribution of the national income. We know that an excessive amount of savings and investments may result in a deficiency of consumers' purchasing power with which to buy all the finished goods produced. Overinvestment-underconsumption depressions, as already indicated, are caused by excessive productive investments.

There are no statistics which give direct information on the *current* volume of individual savings. Many statistical series, however, contain valuable information on the amount of current investment of both individual and corporate savings. Corporations frequently pay out only part of their net profits as dividends, and retain the balance as surplus or savings. Information on corporate savings is given in corporation income tax statistics.²

Individual and corporate savings are productively invested in numerous ways. The most important forms of investments are: (1) direct additions to capital goods of business enterprises, (2) time deposits in banks, (3) purchase of new corporate securities, and (4) investments in new construction. Except for information on corporate savings and new security issues,³ there is no reliable information available on the amount of current savings invested in additional capital goods of business enterprises. Figures on the growth in time deposits constitute valuable information on this form of investment of savings. Time deposits are important not only because they return a money income to investors, but

¹ See Chart XII, p. 276.

² See Table IV, p. 282.

³ See Table V, p. 283.

because they represent, in a large measure, the surplus savings of the community.

The amount of new stock and bond issues is shown in tables of new capital issues compiled by the *Commercial and Financial Chronicle*.¹ The amount of investments in new construction is known in part from figures compiled by the F. W. Dodge Corporation on nonresidential construction contract awards.² While this statistical series represents only a part of the total investments in new construction, it measures an important part of these investments.

SECTION 3

STATISTICAL ANALYSES OF BUSINESS MOVEMENTS

The interrelation of various movements during business cycles may be analyzed by describing statistically the cyclical fluctuations which took place from 1919 to 1936.³

In 1915, the World War boom started in the United States and continued until the Armistice, in November, 1918. There was a decline in business activity from November, 1918, until May, 1919. From June, 1919, until August, 1920, there was a boom which was definitely of the inflational type. At the end of the war, Europe was still without an adequate domestic food supply, and great dependence was placed upon importation of foodstuffs from America and other non-European countries. These importations were purchased largely with the proceeds of loans. In the United States, the return of the American Expeditionary Force and the removal of wartime limitations upon production and consumption released a pent-up demand for consumers' goods of all kinds. As a result, industrial activity increased rapidly.

This intensified industrial activity was accelerated by the inflational policy followed by the Federal Reserve and com-

¹ See Table I, p. 278.

² See Table I, p. 278.

³ Numerous statistics are mentioned in this section. Charts and tables presenting these statistics are found in the Appendices of this book, unless other reference is made.

mercial banks. The Armistice ended the war, but it by no means ended the financing of war expenditures. The government requirements for postwar financing—principally the flotation of the victory loans—caused the Federal Reserve Banks to continue the inflationary policy which had been necessary for the sale of government bonds during the war. The Federal Reserve Banks were not at liberty to restrict credit until 1920, after the postwar inflation had reached its advanced stages.

Prices, bank loans, employment, department-store sales, and common-stock prices responded to these conditions in January and February, 1919, and rose rapidly. The index of prices rose from 130 in February, 1919, to the highest point of 167 in May, 1920; bank loans increased from 77 in February, 1919, to 110 in October, 1920; employment from 102 in February, 1919, to 116 in March, 1920; department-store sales from 66 in January, 1919, to 98 in July, 1920; and common-stock prices from 73 in January, 1919, to 100 in October, 1919.

The index of industrial production was 76 in March, 1919, and 95 in February, 1920; the employment index was 102 in February, 1919, and 116 in March, 1920; the payrolls index was 89 in April, 1919, and 124 in June, 1920. The debits to individual accounts index rose from 70 in March, 1919, to 102 in January, 1920. The index of unfilled orders, which is not available for the year 1919, was 248 in May, 1920—the highest point this index ever reached.¹ The reserve percentage of the Federal Reserve Banks was 50 in January, 1919, and ranged between 41 and 43 during the months of 1920, lower than it has ever been since.²

The termination of this after-the-war boom appeared first in the index of industrial production. Industrial production varied uncertainly from March to August, 1920, and then plunged downward from 86 in September, 1920, to 65 in

¹ *Survey of Current Business*, Annual Supplement, 1932, p. 16.

² *Federal Reserve Board Twenty-First Annual Report*, p. 84.

July, 1921. Decreasing employment also gave an early sign of the approaching crisis and depression. The employment index fell from 115 in April, 1920, to 81 in January, 1921. Wholesale prices showed a drastic decline from 167 in June, 1920, to 93 in July, 1921. In June, 1920, the index of payrolls, as well as the index of debits to individual accounts, began to decline. By October, 1920, all indicators of business activity were declining rapidly. Commercial failures increased from 6,451 in 1919 to 19,652 in 1921.¹ Bank failures, which numbered 50 in 1919, increased to 404 in 1921.² The compiled net income of corporations fell from 8,415 million dollars in 1919 to 5,873 million dollars in 1920, and to 454 million dollars in 1921.

The crisis of 1920 was marked by a great fall in prices, which began with a sharp decline in August, 1920, and continued each month until December of that year. There were slight checks to the rate of decline in prices in January and February, 1921, but the price index did not level out until June, 1921. At that time, no movement was so devastating to the economic system as this one. The great fall in prices, and their failure to rise again to the wartime level, did more than any other factor to ruin farmers and debtors, and to cause bank failures.

The crisis and depression of 1920-1921 was also notable for the lag in the fall of the payrolls index behind that of the employment index. The payrolls index rose well above the employment index, and remained at a higher level throughout 1920. But during 1921, payrolls continued to fall, even after employment was definitely increasing. The index of payrolls did not again reach the level of the employment index until 1923.

Speculation during 1919 and 1920 was largely in land and commodities. Throughout 1919, and until the crisis of 1920,

¹ *Dun and Bradstreet Monthly Review*, January, 1936, p. 32.

² *Statistical Abstract of the United States*, 1929, p. 322.

the price of agricultural lands rose rapidly, and buyers were found at higher prices. At the same time, manufacturers and merchants, so accustomed to the rising prices of the preceding five years, did not hesitate to stock heavily of raw materials and finished commodities. Losses resulting from these types of speculation influenced subsequent business policies, as evidenced by the later "hand-to-mouth" buying practices.

Business losses resulting from this crisis and depression, while heavy at the time, were sustained over the course of several years, even after recovery had set in. Losses in the agricultural industry were not absorbed by 1929, and they were still evident in 1936. Bank failures increased each year from 1922 until 1926, and commercial failures were more numerous in 1922, a recovery year, than in either 1920 or 1921.

The precipitous decline in business, which began in 1920, was gradually checked during 1921. Wholesale prices reached their lowest point at 93 in June, 1921, after which they fluctuated narrowly until April, 1922. Industrial production reached its low point at 64 in March, 1921, after which it showed no improvement until August, 1921. The employment index of 81 in January, 1921, was practically stationary until January of the next year. The indices of debits to individual accounts and stock prices were also practically unchanged during 1921. However, department-store sales, bank loans, and payrolls continued to decline throughout 1921. In general, stagnation characterized the business trend of 1921, as well as certain aspects of its trend during the first part of 1922.

But during the last of 1921, and the first of 1922, signs of recovery appeared. These signs were halting and uncertain at first, but gradually they became more definite. Industrial production and common-stock prices began to rise in August and November, 1921. Employment and payroll conditions

began to improve in February, 1922, and retail trade definitely increased in volume after April, 1922.

By 1922, recovery from the depression was an accomplished fact so far as production, trade, employment, prices, and consumption were concerned. In other words, there was recovery in business (profit-making conditions); but there still remained underlying problems of maladjustments, such as the bad conditions in the agricultural industry, and the "frozen" debts.

The prosperous conditions of 1922 and the early part of 1923 were slightly disturbed by the recession of 1924. The most pronounced of the occurrences in 1924 was the fall in the index of industrial production. The decline in this index began as early as July, 1923, and continued until July, 1924, when the low point of 84 was reached. Common-stock prices declined from 93 in February to 79 in July, 1923, after which the upward course was resumed. The employment index was 106 in June, 1923, and declined to 91 by July, 1924. Payrolls declined more than employment, and later, without any appreciable lag, they rose more than employment. Wholesale prices fell moderately from March, 1923, to June, 1924. These were the principal indications of recession. Other conditions showed little change. Before resuming their upward trend, department-store sales leveled off slightly during the last half of 1923, all of 1924, and the first half of 1925. Food costs showed a slight decrease from June to September, 1924, corresponding roughly to the decline in average weekly earnings. There was no perceptible change in debits to individual accounts, and bank loans showed only a slight leveling in the upward trend which began in 1922.

By 1925, prosperous business conditions returned—even more prosperous conditions than in 1923, as indicated by most measures. This new prosperity was slightly interrupted again during the middle of 1927, in a fashion quite similar to that of 1924. Industrial production, as in 1924,

was the most pronounced in its slackened pace. Other recessions were slight and temporary, and had few features which distinguished them from the fluctuations of 1924.

The index of industrial production climbed from 101 in November, 1927, to 125 in June, 1929. On the other hand, prices did not show an upward movement, but instead remained level through 1928 and until October, 1929. Department-store sales did not increase much after 1927, and leveled off during the first part of 1929. Speculation, characteristic of boom periods, turned to the stock exchange. The highest point reached by the common-stock index was 310 in August, 1929, which was more than three times the level of 1923-1925, and double that of the first part of 1927. During this stock-market boom, the Federal Reserve ratio did not fall below 63, and there was never the shortage of credit which characterized the 1915-1920 boom.

While there were recessions of a cyclical character in business activity in 1924 and 1927, the whole period from 1922 to 1929 constituted a business prosperity period of an overinvestment-underconsumption nature. From 1922 to 1929, pronounced changes occurred in the distribution of the national income, and in savings and investments, which gave the 1929 depression its overinvestment-underconsumption character.

Income tax returns show that individuals in the higher income classes received greater increases in income from 1922 to 1929 than did individuals in the lower income groups. The aggregate incomes of those receiving \$50,000 or more increased 241 per cent from 1922 to 1929, while the total incomes of persons receiving less than \$5,000 actually decreased 34 per cent. The total incomes of the group with incomes ranging between \$5,000 and \$10,000 increased 68 per cent, and the incomes of the \$10,000 to \$50,000 class increased 80 per cent. The total incomes of those making income tax returns increased 20 per cent from 1922 to 1929.

Those in the higher groups, who received an increasing share of the total national income, obtained their personal incomes principally from dividends, interest, rents, and other property.

From 1921 to 1929, the percentage of the value added by manufacture which was paid out as wages in the manufacturing industries decreased from 44.7 per cent to 36.4 per cent, although the total value added by manufacture increased 36.7 per cent.¹ This decline in labor's share in manufacturing is indicative of the decreasing amount of the national income which was received by laborers as a whole.

Large savings were possible from 1922 to 1929 because of the large volume of production and the growing inequality in personal distribution of the income. The compiled net profits of corporations, after deducting income taxes, increased from 5,183 million dollars in 1922 to 10,677 million dollars in 1929. The savings of corporations (net profits less taxes and cash dividends) totaled 17,055 million dollars during these eight years, or an average of 2,132 million dollars a year. The size of these savings is shown by comparison with the national income realized, which was estimated to be 61,157 million dollars in 1922, 84,119 million dollars in 1928² (an increase of 37.5 per cent), and 81,136 million dollars in 1929.³

A large portion of personal savings are invested in stocks and bonds and buildings. New capital issues in 1922 amounted to 5,236 million dollars. By 1929, they had increased 121.4 per cent, having mounted to the total of 11,592 million dollars. Nonresidential construction relative to 1925 increased from 75 per cent in 1922 to 118 per cent in 1929. Residential construction increased in the same proportion. The extent of surplus savings during this

¹ *Statistical Abstract of the United States*, 1934, p. 697.

² W. I. King, *The National Income and Its Purchasing Power*, p. 74.

³ *National Income*, 1929-1932, Senate Document No. 124, 73d Congress, 2d Session, p. 10.

period is indicated by the increase of time deposits of reporting member banks. They increased from 3,720 million dollars in December, 1922, to 6,727 million dollars in December, 1929, an increase of 80.8 per cent.

The depression of 1929 came with little surface warning. In fact, even after the recession started, public confidence in the soundness of business conditions was so great that it was said by some students that "a new era" had arrived, and that new levels of business activity had been established. Nevertheless, an unbalanced condition in industry had developed, and the new level of business activity ceased. In 1929, few could foresee the destructive influence of the maladjustments in income distribution and in savings. Stocks of commodities were larger in 1929 than ever before. Industrial production declined in July, 1929. Department-store sales in 1929 failed to continue their upward course of previous years.

Prices on stock exchanges reached a climax in the middle of September, 1929, when they fell, and then recovered a great part of the decline by the middle of October. But during the closing days of October, the stock-market crash brought declining prices without check under the pressure of tremendous liquidation. During the last days of October, the high of the daily range of stock prices was usually below the low of the previous day's range. About four million shares were sold daily during July and August, and then fifteen million shares were sold daily in October. The physical facilities for carrying on this volume of transactions were taxed to the limit, and price tickers were hours behind in their recordings. Hundreds of millions of dollars in security values were obliterated in a few days' time. These dramatic events are significant in that they describe the feverish activity, the fear, and the losses common to crises in security markets.

Until June, 1932, the trend of business was cumulatively downward. The extent and duration of the decline marks

this period of liquidation and depression as one of the most severe ever experienced. There were times when the downward movement was halted temporarily. Improvements of a temporary nature occurred in some aspects of business conditions during the first part of 1931 and the last part of 1932. But the liquidation of credit, securities, and commodities was generally continuous until June, 1932. Bank credit and other forms of credit became more and more difficult to obtain. Bank failures during 1930, 1931, and 1932 numbered 5,102.¹ Credit liquidation progressed until most countries of the world finally suspended the gold standard entirely and established controls over foreign exchanges. Despite the fall in security prices during the last of 1929 and all of 1930 and 1931, except for numerous short-lived checks, there was a final downward plunge of the market during the first half of 1932. Liquidation in commodity values progressed over a longer period of time; not until March, 1933, did the decline in commodity prices end.

Employment and payrolls continued to fall without appreciable interruption until July, 1932. Payrolls declined more than employment. From July, 1932, until March, 1933, business activity did not decline further, but fluctuated narrowly about its low level. In 1932, business was highly unprofitable, as evidenced by a net deficit of corporations amounting to 4,155 million dollars. The national income produced during 1933 was estimated to be only 57 per cent of the income for 1929.² Losses from 1929 to 1933 greatly exceeded savings and investments.

The credit liquidation and bank failures prior to the bank holiday of March, 1933, had already exerted their influence on business. The holiday was merely the final event in the breakdown of the banking system. March, 1933, was signifi-

¹ *Statistical Abstract of the United States*, 1934, p. 260.

² Robert F. Martin, "The National Income, 1933," *Survey of Current Business*, January, 1935.

cant, however, in that it marked the beginning of certain improvement in business. Retail sales, industrial production, and employment improved after this date, except for brief recessions during the last of 1933 and the last of 1934. Recovery was pronounced in retail trade. The supply of bank credit was made abundant. Excess reserves of member banks increased after March, 1933.¹ Business failures numbered 31,822 in 1932, with liabilities of 928 million dollars. In 1935, the number of failures was 11,879, less than those of any year from 1920 to that date.²

¹ *Federal Reserve Bulletin*, February, 1936, p. 88.

² *Dun and Bradstreet Monthly Review*, January, 1936, p. 32.

CHAPTER V

ORIGIN AND CUMULATION OF BOOMS

SECTION 1

INDUSTRIAL FORCES THAT GENERATE BOOMS

As already observed, the outstanding characteristics of a boom period are rising prices, greater sales and production, and expanding bank credit. It is quite evident that at such times the rapidly expanding market demand for goods in general causes the market demand for them to exceed the supply in the market. Certainly, this exceptional demand for goods in general could not be initiated by a great increase in the market demand for consumers' goods. Consumers' goods are (or should be) paid for out of money income derived from production. If all the money income were spent for consumers' goods, the market demand for them would not exceed the value of the net production of industry. Since the money income is derived from net production, it cannot increase without first having an increase in both net and gross production, whereas a boom demand for goods precedes the rise in production.

Before an inflationary boom can occur, the market demand for the total output of all industrial enterprises must exceed the stabilized value of that output. Such a market demand would be impossible unless purchasing power, in addition to that derived from sale of the current output, is used to make purchases of goods and services. All the money received by enterprises from the sale of their output, we have learned, is used (1) to pay for goods and business services utilized in the productive processes and (2) to compensate those individuals who furnished the factors of production.

If the enterprises and individuals receiving the money paid out by the operating enterprises used it to purchase goods and services, they would be able to buy no more than the current total output of industry at a stabilized value. If the output of industry is to sell at a higher price level, some outside purchasing power, in addition to that currently derived from disbursements of business enterprises, must be used to purchase goods and services in the market.

A market demand for goods in excess of their market supply may be brought about in either of two ways: (1) business enterprises may borrow funds at the banks to supplement their circulating capital in purchasing goods and services; and (2) individuals and governments may borrow from the banks, or new money may be issued and used to supplement their current money incomes in purchasing goods and services. In either case, the current market demand for goods would exceed the stabilized value of the current output of industry. Consequently, prices would rise to equalize the market demand for goods and the market supply of them. Without the use of new or additional purchasing power derived from new money or the expansion of bank credit (or from some other outside source), there could be no boom or rising prices. As a matter of fact, the supplementary purchasing power in peacetime booms has usually come from the expansion of bank credit. In section two of this chapter, inflation through governmental policies will be considered.

Under a stable and sound monetary and currency policy, it would not be possible to have inflationary booms without extensive use of bank credit in purchasing goods in the markets. We are not warranted in concluding, however, that the expansion of bank credit is the *cause* of such booms. Bank credit purchasing power is only the *means* or *instrument* used to bring about such boom movements. There can be an expansion of bank credit only when individuals and enter-

prises borrow at the banks to secure additional funds with which to purchase goods or services. The *causes* of credit-inflationary booms are to be found in the reasons why borrowers secure additional bank loans to be used for purchasing additional goods and services. If we are to find the causes of credit booms, we must know why bank credit is expanded.

Only to a very limited extent do consumers obtain bank loans to be used directly for purchasing consumers' goods. Certainly, no appreciable initial expansion of bank credit in this country has ever been due to such bank loans, though, by means of installment credit, such loans have played a part in the cumulative expansion of credit during booms. Bank loans increase largely for "business" reasons. That is, business enterprises and businessmen borrow funds from banks to be used in their business operations for profit making. They borrow in order to secure funds with which to buy more producers' goods and services. They borrow with the expectation that they will make satisfactory profits from those operations. The forces which create opportunities for large prospective profits in business are the forces which *cause* credit booms. Those forces induce businessmen to expand bank credit in order to take advantage of the prospective profits they create. What, then, are the principal generating forces of peacetime credit booms?

In our national economic history, there have been four kinds of industrial occurrences which, at different times, have generated sufficient prospects of profits to induce enterprises and individuals to borrow bank funds in order to take advantage of the profit opportunities created by them. The industrial occurrences or happenings of this character are as follows: (1) the periodic opening or settlement of new territories or sections of the country; (2) the exploitation of newly discovered natural resources, or of those recently made available; (3) the extensive development of new industries; and (4) revolutionary changes in old industries, due

to technological changes either in the qualities of their products or in their methods of production. Large-scale simultaneous occurrences of two or more of these movements have been responsible for the origin of most of our peacetime inflationary booms.

1. Settlement of New Territories.—From the founding of the nation until 1890, its outstanding economic achievement was the settlement of the frontier territories to the west. After the development of railroad transportation, the principal retarding forces to a more rapid settlement of the frontier territories were the lack of settlers and the limitations on our ability to finance more rapid settlements. From colonial times until the complete occupancy of the country, the settlement of the West was made in wavelike movements. We had such movements in the settlement of western New York and western Pennsylvania, the settlement of western Virginia and Kentucky, the settlement of the Ohio Valley, the settlement of Alabama and Mississippi, the settlement of the Great Lakes region, the settlement of Missouri and Iowa, the settlement of Kansas and Nebraska, the settlement of California, the settlement of Oregon, and on down to the settlement of Oklahoma.

Each of these westward movements of population required the building of farm homes, the equipping of farms, and the building of towns and means of transportation. Each necessitated the investment of large capital funds, both permanent and circulating. The current savings of the nation were not adequate to furnish all the capital funds needed for these great westward movements. Bank credit was therefore utilized extensively in financing them. Usually, as a result of the wavelike settlement movements, the bank credit of the country expanded and the general price level rose. The panic of 1837 followed the bank credit expansion movement of the settlement of Alabama, Mississippi, and the Ohio Valley. The crisis of 1873 followed the Civil War and the

homestead settlement of the western corn and wheat belts. Bank credit expansion, due to the overbuilding of railroads and the oversettlement of the northwestern part of the country, was one of the contributing causes of the depression which began in 1893.

Often the inflational consequences of these territorial settlement movements operated in conjunction with credit inflation brought about one or more of the other boom initiating forces. New settlements have frequently occurred at the same time that newly discovered natural resources were being exploited and new industries were being developed. When sufficient reserve bank credit was available, a combination of such movements made a boom inevitable.

2. Exploitation of Natural Resources.—Wherever highly profitable natural resources are discovered, the exploitation of those resources causes an industrial expansion of that community. The process of exploitation of a particular resource usually requires the use of large quantities of producers' goods, and the construction of residential, mercantile, and other facilities to take care of the locally expanding population. Such a movement on a large scale creates a brisk demand for raw materials and labor. Usually, a great deal of new bank credit was used in carrying on such expansion movements. The act of making known resources available for exploitation, either by legislative mandate or by the development of means of transportation and communication, results in industrial expansion of the territories in which the resources are located—a situation similar to the expansion which takes place when new and profitable resources are discovered in older communities.

3. Development of New Industries.—The inventive genius of the people is at work at all times in discovering and developing new kinds of goods and services for human use, as well as in conceiving new methods and inventing new machines to be used in production. Usually, however, new industries

are launched only when business conditions are favorable; few new industries are established during periods of depression. The development of an important new industry involves a great deal of new construction and the manufacture of a large quantity of specialized capital equipment. To finance such an undertaking requires the direct investment of a large amount of investment funds. The development of a new industry, also, involves an expansion of those industries which furnish the goods and materials for its development, and this expansion of established industries requires the investment of additional capital funds. When several new industries are developed at the same time, the demand for new investment funds is greater than the accumulated and current savings of the nation. Bank credit expansion, then, is used to secure adequate capital funds to finance the industrial expansion.

It is hardly necessary to point out that new industries frequently offer very large prospective profits to enterprises in them. Large fortunes have frequently been made by the pioneers in many of our new industries. Profits are always higher in successful new industries than they are in the well-established competitive industries. For this reason the new industries which show promise of success are developed very rapidly when sufficient investment funds can be secured for that purpose.

4. Revolutionary Changes in Old Industries.—The application of new discoveries and inventions to old, well-established industries has frequently revolutionized their internal organization. Any new productive process which improves the quality of the product or lowers the cost of production will be desired by all the enterprises in an industry so affected. Improved machines which displace laborers, increase the volume of production, and lower the cost of production will be purchased by all the enterprises in an industry that can afford to do so. If a competitor purchases

new equipment which enables him to produce at a cost much below that of those using the old-type equipment, the latter must also purchase the new type or eventually be forced out of business. If a superior quality of goods, made by a new and cheap process, is produced by an enterprise, all its competitors must change to the new process or lose their businesses.

The steel, textile, automobile, shoe, motion-picture, and other industries have undergone fairly complete internal changes as a result of the discovery of new processes, and the development of new automatic machines for those industries. Rapid reorganization of an established major industry requires the use of a large quantity of new investment funds, as well as the making of a large quantity of new capital equipment. When several industries simultaneously undergo such internal changes, the general demand for new capital goods increases tremendously. Under such circumstances, bank credit is usually expanded to finance the capital goods expansion.

It has been pointed out already that in most cases credit booms are not started by the activity of only one of the four generating forces discussed above. In the origin of most of our peacetime inflationary booms, two or more of the four forces were active in bringing the movement into existence. It appears that some of our earlier inflationary booms were generated chiefly by large western settlement movements, together with extensive exploitation of natural resources. But even in the earlier booms, the development of new industries and the expansion of old ones played a part in bringing about the general increase in demand for goods, and the expansion of bank credit. The later peacetime booms were generated principally by the establishment of new industries and rapid changes in old ones. This was particularly true of the 1905-1907 boom, which ended with the crisis of 1907.

We shall see in the next section of this chapter that there are forces other than the above-mentioned four, which also generate inflational booms. But these four are thought to be the only inflational-boom-generating forces which originate within our industrial system. The others are due to wars, to contact with other nations, or to certain changes in the monetary or currency policies of the country.

SECTION 2

OTHER BOOM-GENERATING FORCES

We have learned that whenever the general market demand for goods persistently increases more rapidly than the volume of industrial production, a business and industrial boom will result. We know, however, that such a persistent rise in general market demand for goods could not occur unless the current purchasing power of business enterprises and individuals were supplemented with new or additional purchasing power. In the first section of this chapter, we learned that in most cases bank credit expansion was the source of the new or added purchasing power required for making boom demands effective. We found also that the reason bank credit was used frequently for that purpose was because of the appearance of many attractive opportunities to make large profits from immediate industrial expansion.

Whenever a large quantity of newly created purchasing power is used in the markets to purchase goods and services, there develops a market shortage of goods, and prices rise. Not all newly created purchasing power (money) consists of new bank credit; nor are all increases of outstanding bank credit due to loans received by enterprises and individuals for business uses. What are the sources, other than expansion of bank credit, from which the current purchasing power (money) of the nation may be increased? Is it possible or probable that additional purchasing power from these sources could initiate a boom movement? How is outstanding bank

credit expanded, other than for commercial and industrial uses? Can such an expansion bring on an inflational boom? The question of whether there are boom-generating forces other than those already discussed will be settled by answering the above questions.

The quantity of the purchasing power in a country may be enlarged by increasing the amount of coined money or the amount of currency (gold and silver certificates, treasury notes, and bank notes). In order to increase the quantity without decreasing the quality of coins or certificates representing the amount of monetary bullion securing them, it is necessary to increase the monetary stock of metal in the country. This may be done by increasing the domestic production of the metal (or metals), or by importing it (or them). The number of monetary units (dollars) may be increased by decreasing the size of each unit, or by dividing the monetary stock into a greater number of smaller units, while retaining the same name (dollar) for the new smaller units. The credit currency of the country (treasury notes and bank notes) may be increased by the simple process of issuing new currency under legislation authorizing the issuance.

It is not possible, in a short period of time, to increase greatly the market purchasing power of the nation, either by increasing the domestic production of gold (and silver) or by importing the bullion from other countries. The reasons why this is true are as follows:

While an adequate monetary stock of gold bullion is essential for the maintenance of our monetary system, this stock represents only a small portion of the total quantity of purchasing power (dollars) in use at any one time in the country. Prior to 1929, the gold dollars and gold certificates represented less than 10 per cent of the total amount of money in use. It would not be possible to increase our gold

bullion monetary stock as much as 25 per cent within two years by an increase in both production and importation of metal. If it were possible to do so, however, the total amount of money in use would be increased very little, if at all. If all the new monetary metal were put in use directly, the increase in the circulating mediums of the country would be less than $2\frac{1}{2}$ per cent.

Assuming that the country already had adequate gold reserves for its monetary and currency system, there might be a slight increase in the purchasing power used in the markets as a result of a rapid and large increase in its gold stocks over a period of two or three years. But over a shorter period of time, the rise in market demand due directly to the larger quantity of gold would be very slight, if even perceptible. On the other hand, if there existed a shortage of gold reserves or a shortage of bank reserves in the country, an increase in the monetary stock of gold might result in a considerable expansion of bank credit. In that case, the increase in the gold supply would result indirectly in a considerable rise in the purchasing power in use—but the rise in the volume of circulating mediums would consist largely of new bank credit.

Should there be free coinage of silver, what has been said with reference to an increase in the monetary stock of gold would apply also to silver. Under a system of limited coinage of silver, of course, legislation which increases the quantity of silver which may be used for monetary purposes would increase the amount of money available for use in trade and business. But such legislation could not bring about a very rapid increase in the total amount of money in circulation. Over a short period of time, the augmentation of the total quantity of mediums of exchange in use would be slight. Our experiences with the silver legislation of 1933–1934 proved this to be true.

Reduction in the size or content of the standard (gold) dollar would immediately increase the number of gold dollars in the country. A reduction of 50 per cent in the size of gold dollars would double their number. Such action in itself, however, would not increase the number of dollars in the hands of enterprises and individuals; the total increase would go to the treasury of the government. Doubtless, as a result of an increase in government expenditures, such credit money would be used later by the government to purchase goods and services, and would thus increase the market demand for goods. But in that case, the quantity of new purchasing power thrown in the market would be very small in comparison with the volume of purchasing power (total money) already in use.

Although the total purchasing power in use would not be increased greatly as a result of a 50 per cent reduction in the size of the standard dollar, the general price level would still rise considerably. The rise in prices in such a case is due much more to the decrease in the intrinsic value (bullion value) of the standard dollar than to the increase in the quantity of money used to purchase goods and services. Psychologically, individuals and enterprises make an effort to change their dollars for more valuable goods. Consequently, there follows an increase in the velocity of money circulation and an increase in the market demand for goods. Prices rise as a result of this increased demand for goods.

It is extremely doubtful whether, under ordinary conditions, an increase in the general price level caused by devaluating the standard dollar would initiate a business and industrial boom. Such a governmental action would be followed by a temporary rise in the volume of sales and production, and by an increase in profits. But, unless opportunities for large profits from industrial expansion had been created already by one or more of the four forces discussed in the first section of this chapter, little or no capital expan-

sion of industry would result from the temporary improvement in business.

A rise in the general price level thus brought about would decrease the purchasing power of the national money income relative to the market value of the net product value (net production). The value of the current output of consumers' goods, moreover, would rise much faster than the purchasing power of consumers derived from money income. Within a short time following such a rise in prices, sales, and production, surplus goods would accumulate in the markets and prices, sales, and production would fall again. An upward movement in business brought about by such a monetary policy could be sustained only by an expansion of bank credit for industrial purposes, or by a government expenditure policy financed by government or bank credit.

Of course, if a large and increasing quantity of either treasury notes or bank notes were used in the markets to purchase goods and services, the demand for goods would exceed the supply, and prices would rise. Should a large-scale use of such new credit money continue for an appreciable period of time, a veritable inflational business boom would develop. The probability that such a credit policy would generate a boom would depend upon the period of time covered and the relative quantity of the new credit purchasing power thrown into the markets to purchase goods. The possibility of such a thing would depend almost entirely upon the government's having a huge expenditure program, far in excess of its revenues from taxes. Great quantities of new treasury notes are not usually issued unless the government has a large budgetary deficit which it cannot meet by further loans.

Furthermore, large quantities of new bank notes are not ordinarily issued as a result of the expansion of bank credit for business reasons. Usually, cash reserves of the banks are adequate to permit such an expansion of bank credit

without the issuance of new bank notes. Large issues of new bank notes usually result from heavy governmental borrowing from banks to meet budgetary deficits.

Not all government budgetary deficits result in the issuance of new treasury notes, or of new bank notes; nor do all budgetary deficits result in increasing the outstanding bank credit. Small deficits may be met by the sale of government securities, which are purchased with proceeds from the current money income. Such sales would cause no rise in outstanding bank credit. But if purchasers of such new securities borrow from banks in order to obtain the funds with which to make the purchases, an increase in outstanding bank credit will result therefrom. When heavy borrowings are made by the government to meet large current deficits, the sale of its securities always results in the expansion of bank credit, and frequently results in new bank-note issues. A great amount of such securities purchased by individuals are paid for in part by proceeds from new bank loans. All such securities bought by the banks are paid for out of bank funds. Then, when their current funds run low, the banks issue their own notes (promises to pay) to replenish their funds for further purchases of government securities.

In the majority of cases, the major portion of the costs of wars is met by government loans. In some cases, all the new government securities are purchased by individuals and investment organizations. In others, the banks purchase a large portion of them. When the new security issues are great in amount, individuals will borrow from banks to obtain part of the funds with which to purchase the new securities. When the banks buy such securities in large quantities, it is frequently necessary for them to issue their own notes in order to obtain adequate purchase funds. Great increases in bank-note issues have occurred many times in various European countries as a result of banks' absorbing large quantities of government war loans. In this country, there

was much expansion of bank credit during the World War, resulting from individuals' borrowing from banks to obtain funds with which to purchase the Liberty Bond issues. Whenever governments are unable to secure adequate loans with which to finance wars, they resort to the issuance of their own treasury notes (paper money).

Major wars, financed largely by government loans, always cause inflational business booms. The large and continuous war purchases by the government with newly created purchasing power is the generating cause of war booms. If wars were financed from proceeds of the current money income—by higher taxes or purchases of government securities with current savings—they would not cause booms. But it would be impossible to finance the earlier stages of a major war, if not all stages, by such a financial policy. Very large government expenditures must be made quickly to launch a respectable war; such expenditures cannot be met immediately from the current money income of the nation. Hence, we have the use of new and artificial purchasing power in buying war goods, and the consequent market shortage of goods, rising prices, and war boom conditions.

Large peacetime government expenditures financed through government loans, which were made possible by the expansion of bank credit (or some other new purchasing power), have the same effect in increasing demand for goods as war expenditures by the government. Up to the present time, however, the extraordinary expenditures of our government in peace times have never been so large, for the same period of time, as have war expenditures.

The extraordinary depression expenditures of our government from 1931 to 1936 were very large, and were financed by government loans and the issuance of new purchasing power. The new purchasing power consisted of new gold and silver certificates and the use of bank funds. As we shall see later, a boom did not occur at that time because of

the severity of the existing depression and the general fear created by the government's monetary and fiscal policies. Business and commercial bank credit were being decreased part of the time that the government was increasing bank credit by issuing new securities to finance its expenditure program. Both the volume of sales and prices, however, were greatly stimulated by this tremendous peacetime government expenditure program.

An increase in the volume of foreign trade (both imports and exports) would not affect the trade balance in the domestic markets. A great increase in exports over imports would tend to reduce the supply of goods in the domestic markets, but if the exports were financed through the purchase of foreign securities with current savings, the domestic demand for goods (purchasing power available for the market) would be reduced by the amount of the excess exports. Should the increased favorable balance of foreign trade be paid for by the importation of gold, the purchasing power available for the domestic market would be increased, and the domestic supply of goods would be decreased. Such a situation, if it occurred on a very large scale, would tend to create a domestic shortage of goods and a rise in the domestic price level. (It is not believed, however, that under modern conditions, a favorable balance of trade alone could be of sufficient strength to originate a boom. Doubtless, improvements in foreign trade conditions have cooperated with other boom-generating forces in bringing about some of our booms of the past.) The financing of our huge favorable balance of trade during the World War by government loans secured through the expansion of our bank credit was a powerful force in creating a shortage of goods in our markets and in raising the price level.

In the next section of this chapter will be found a discussion of how booms spread from one country to others. They spread, of course, through foreign trade and financial rela-

tionships. There is little or nothing magical about the effects of foreign trade; it works on the same fundamental principles which regulate domestic trade.

SECTION 3

CUMULATIVE DEVELOPMENT OF BOOMS

We have learned that the creation and use of a great deal of new purchasing power through the expansion either of bank credit or of government credit is necessary for the starting of a business boom. After a boom is once started, it is then essential to have continued expansion of such credit purchasing power in order to keep it going. The cumulative upward movements of booms feed upon new credit purchasing power.

During booms, business enterprises greatly expand their business operations. They acquire a great deal of additional permanent and circulating capital goods and equipment. They secure the funds for most of this new capital either by borrowing from banks directly or by selling their own securities to investors. Funds for new circulating capital are usually borrowed from the banks, and funds for new permanent capital are derived, in most cases, from the sale of new securities. Funds with which to purchase new securities of business enterprises in boom times are derived only in part from cash savings and current incomes of individuals. At such times individuals, like business enterprises, borrow in order to invest. If they are unusually attracted by the new securities offered by the enterprises, and have not sufficient cash with which to make purchases, they obtain the necessary funds through bank loans. A considerable portion of the new bank loans during boom periods are made to individuals to enable them to purchase corporate securities.

Only part of the individual bank loans are made for the purpose of obtaining funds with which to purchase new

securities and new capital equipment. A large part of the proceeds from them are used for the speculative purpose of buying land and old corporate shares. It is the intention of each individual, when he purchases on credit corporate shares, land, or capital equipment, either to sell what he has purchased at a profit, or to keep it and pay for it out of his future savings. The higher the prices of securities, land, and capital equipment, and the greater the amount of speculation, the greater the quantity of bank loans obtained by individuals to be used for the purpose of purchasing them.

Whenever there has developed a brisk demand for many types of producers' goods used in industry, as occurs at the beginning of a boom, there will follow a rise in the prices of consumers' goods, as well as in the general price level. This proposition rests primarily upon the augmented money incomes of consumers, as a result of an increase in the output of producers' goods. However, a thorough understanding of how and why a growth in the demand for particular producers' goods brings about a general cumulative increase in the price level requires a somewhat detailed analysis of the operation of our industrial system. We shall find that new prospective profits are generated in practically all industries by the upward movement initiated by a great demand for particular producers' goods.

An expansion in the demand for particular producers' goods will cause all business enterprises supplying those particular goods to increase their demands upon other enterprises for raw materials and capital equipment used by them. An increase in the demand for particular producers' goods, therefore, will be transmitted, link by link in the chain of production, back to the producers of the primary raw materials upon which those goods rest. As this increased demand for particular producers' goods is transmitted through the long chain of business enterprises to the various producers of

primary raw materials, it grows in physical volume as it passes from link to link in the production chain.

A substantial growth in the demand for a large quantity of particular producers' goods will measurably stimulate the output of many industries and raise the prices of the products they turn out. This will swell the net product value of those industries and enable them to pay greater money incomes (wages, interest, rents, and profits) to the public. When such a movement affects many industries simultaneously, the sum total of consumers' money incomes will be increased. Consumers, as a class, will then demand additional consumers' goods in the markets which, in turn, will result in a general rise in the prices of this class of goods. The general increase in prices of consumers' goods will stimulate additional demand for capital equipment with which to produce them. Thus, the growth in demand for producers' goods of particular kinds results in a general increase in demand for producers' goods as a whole, as well as in a general rise in the demand for consumers' goods. The increased demand for goods of all kinds then becomes cumulative.

The principal causes for this cumulative growth in demand for goods of all kinds are: (1) the necessity of having large additions to permanent capital equipment in order to increase output; (2) the desire on the part of businessmen to increase stocks of goods before prices rise higher and goods become more scarce; (3) the initial increase of consumers' money incomes as compared with the initial rise in the volume of production of consumers' goods; and (4) the length of time necessary for primary raw materials and capital equipment to mature into finished consumers' goods.)

1. As a general demand for producers' goods increases, it is not only necessary for each business enterprise to buy larger stocks of raw materials to expand its output, but also, as its output expands, it must purchase additional permanent capital equipment. As this demand is transmitted from link

to link, the total demand for permanent capital (machinery and construction) becomes momentous, so that the manufacturers of equipment and supplies of all kinds must greatly expand their businesses in order to meet this increase in demand. This means that they must buy more raw materials and machinery in order to turn out the greatly increased supply of equipment. The cumulative demand for permanent capital equipment can be met only by the production of additional basic raw materials, such as iron and other metals, stone, bricks, cement, and lumber, to be used for their manufacture. The demand for permanent capital equipment and for the raw materials from which it is made becomes so great that the prices of these raw materials soar far above the prices of other commodities. With each business organization, the amount of new capital equipment necessary to increase the volume of its output, after full capacity has been reached, for several months will exceed, many times over, the value of its additional output. But the demand for the added output is great; therefore, the demand for the new capital equipment is greater.

2. When prices are rising consistently, businessmen endeavor not only to replenish stocks of goods utilized in operation, but also to increase the quantity of their stocks. They do this, first, because they wish to buy reserve stocks before prices rise higher, and, second, because they are fearful of such a shortage of those goods that they might be unable to get them in sufficient quantities to continue their increased operations. This increased demand for stocks of goods, like the increased demand for permanent capital equipment, becomes more intense in the chain of production as the links nearest the primary raw materials are reached. It is near the primary raw materials that the highest prices for producers' goods are found.

3. The expansion of business organizations engaged in making producers' goods involves the employment of more

labor, the use of more land, the use of more capital, and the making of greater profits. Not only are more labor, land, and capital used, but the rates of wages, rent, interest, and profits rise with the increase in the price level. As the value of their net product increases (from greater volume and higher prices), business organizations pay greater quantities of money for wages, rent, interest, and profits (money income) to individuals in return for the use of the factors of production. Because of our roundabout methods of production, during the first stages of a boom, consumers' money incomes increase more rapidly than the output of consumers' goods. This situation causes an intensified demand for available consumption goods, and a consequent rise in their prices. Under such conditions, not only do the prices of consumption goods rise considerably, but there is much complaint that additional quantities of certain goods are not to be had at any price.

The rising level of prices of consumers' goods gives a sustaining basis for further demand for producers' goods, which added demand augments their prices. This, in turn, causes further expansion of the operations of business organizations engaged in making producers' goods. Thus the quantity of money income is again increased, with a resulting increase in the demand for consumers' goods, and further rise in their prices. Again, the demand for producers' goods is intensified.

4. After the slack has been taken up in industry, and full operation is attained, the output of consumers' goods cannot be increased greatly within a short period of time. In order to increase this output, it is first necessary to increase materially the output of producers' goods from which consumers' goods are made. To accomplish this requires extensive expansion of the permanent capital equipment in each link of the chain of production. For many months, or perhaps for a year or so, therefore, the business organizations

engaged in making producers' goods may greatly expand their output without producing a substantial increase in the current output of consumers' goods. The initial augmented volume of production of consumers' goods is absorbed by business organizations (wholesale and retail) in increasing their stocks of goods. It is therefore apparent that under such circumstances the demand for goods of all kinds is insatiable. Each business organization, with little reference to the activities of others engaged in the same line of business, endeavors to expand its output so as to take advantage of the prevailing high profits. Thus, the money incomes of consumers are augmented, and the cumulative demand for consumers' goods, then for producers' goods, is further intensified.

War booms are usually more intense in their nature than peacetime booms. But, like peacetime booms, when once started, such booms in themselves generate new opportunities for profits, which result in more trade and in commercial and investment expansion of bank credit. Then, the large and continued war expenditures of the government absorb a substantial portion of the supply of goods in the markets. Furthermore, the new credit purchasing power resulting from the huge government loans constantly expands the purchasing power thrown into the markets. New artificial purchasing power is therefore created from day to day, both by business activities and by governmental activities. The result is a large inflationary boom.

Whenever boom conditions develop in any large commercial nation, the effects are likely to be transferred to other commercial nations. Boom effects are spread from one nation to others through the vehicles of prices, foreign trade, and international finance. The prices of many commodities are international in scope. This is true of such goods as cotton, wheat, rubber, silk, and the metals. In fact, most foods and standardized materials, such as building materials,

have international markets and prices. Boom conditions in any country, which cause the prices of international commodities to rise in that country, will tend to produce a world-wide rise in the prices of those commodities.

Usually, when a boom gets under way in any country, the imports into that country will increase as a result of its prevailing high prices. Frequently, countries experiencing booms borrow heavily in other countries to secure funds with which to finance larger imports. Then the loaning and exporting countries experience great improvements in their business conditions as a result of the large foreign sales. If domestic industrial and business conditions are favorable in an exporting country, the improvements in business caused by large exports may develop into a boom. Foreign wars, accompanied by large foreign loans, usually cause boom conditions in the noncombatant commercial and industrial nations, as well as in the warring countries. A world shortage of goods is created by world wars. The wide market shortage is made possible through the use of a great quantity of new credit purchasing power.)

CHAPTER VI

REASONS WHY BOOMS END IN CRASHES

SECTION 1

HOW BOOMS UPSET THE ECONOMIC BALANCE

(As a result of the extensive use of artificial (credit) purchasing power and the constant rise in the price level during booms, the pecuniary volume of trade rises at a much more rapid rate than does the physical volume of production or output. So long as the general price level continues to rise, the national money income increases at a faster rate than does the net volume of production. This is true because the rise in the value of the total output of each enterprise constantly keeps ahead of the increase in the cost of the goods utilized in producing that output. In other words, the goods consumed in the productive processes were purchased at prices lower than those prevailing at the time the output is sold. For this reason, the actual money income (the physical quantity of goods it will purchase) rises faster than does the actual (physical) net production.)

Since the initial increase in the total volume of production during booms is caused largely by an increased demand for capital goods (permanent and circulating) and a rise in their production, the rise in the output of finished consumers' goods and services does not keep pace with the increase in the total volume of production. (After full capacity of production in the consumers' goods industries has been reached, it is not possible to increase the production of consumers' goods so rapidly as it is to increase the production of producers' goods. It takes a considerable period of time for the roundabout process of producing additional finished con-

sumers' goods to be completed. New plant capacity must be constructed in the consumers' goods industries before the production of consumers' goods can be materially increased.)

'It is therefore clear that, if consumers used the same percentage of the national money income to purchase consumers' goods and services during the boom that they used before it began, there would develop a great market shortage of consumers' goods. This would be true for two reasons: first, the national income (in dollars) increases more rapidly than the total physical volume of production; and, second, until the boom is well developed, the output of consumers' goods rises less rapidly than the total physical volume of production. Unless a smaller portion of the total income were used for consumption purposes, there would be a tremendous rise in the prices of consumers' goods. There is, of course, a rise in the prices of consumers' goods at such times, but the rise is less marked than the increase in the prices of raw materials, or in those of semifinished goods.) Why then is there a more intensified market demand for capital goods than for consumers' goods at such times?)

'There are two reasons why the prices of consumers' goods do not rise as rapidly as the prices of capital goods during booms. The first is that there is a highly intensified demand for raw materials, semifinished goods, and capital equipment, brought about by the industrial construction and expansion program thus initiated. This market demand is made effective by supplementing existing purchasing power with large quantities of new credit money in purchasing such goods. The second reason is that a smaller percentage of the national money income is spent by consumers during booms than during the period before they start. In other words, a larger portion of the money income is saved and invested under boom conditions than at other times. Why is this true?)

(The relatively larger savings during booms are due primarily to the fact that, at such times, the money incomes of most large-income receivers are increased much more than the incomes of the smaller income receivers. First, this is true because at such times profits and incomes from property rise much faster than wage rates or incomes from labor. Second, it is true because the large-income receivers enjoy the bulk of the profits and property income payments, while the majority of small-income receivers gain most of their incomes from wages. Under nonboom conditions, the large-income receivers are responsible for the major portion of the nation's industrial savings and investments. Large-income receivers are unable to increase their expenditures for consumers' goods and services in proportion to the rise in their incomes. Consequently, they increase their savings and investments somewhat in proportion to the increase in their incomes.)

(The distributive share which has the greatest increase during booms is profit. Owing to the fact that a considerable period of time elapses between the purchases of raw materials (circulating capital goods) and the production and sale of the finished products, profits of enterprises swell because of the widening of the margin between the cost of the raw materials used and the sales value of the output. The amount of profits from this source depends upon the degree of the rise in prices from the time the raw materials are purchased to the time the finished goods are sold. In most enterprises, also, up to the point of full capacity of operation the cost of production per unit of product tends to decrease with an increase in output. This is due to the fact that greater volume of production allows more economical use of the productive facilities. We know that boom conditions result in fuller operation for most enterprises. Profits are further increased at such times as a result of the fact that wages do not rise as rapidly as does the value of

the net production. A larger share of the money income is therefore left for profits.)

All students of business cycles recognize the fact that wage rates do not rise so rapidly as prices during booms, and that, in point of time, wage rates lag behind prices during the rise. The total amount of money paid out as wages during booms, of course, increases as wage rates rise and as more laborers are employed. But the physical volume of production rises more rapidly than the rate of increase in the number of laborers employed, and there is an increase in the actual (physical) production per laborer. Furthermore, wages per laborer do not rise so rapidly as the value of the net production per laborer. In other words, the total purchasing power paid as wages does not increase so rapidly as the market value of the net production of industry. This means that wage earners, as a class, receive a smaller share of the national money income as a result of inflationary boom conditions.)

The interest payments, of course, constitute part of the national money income. Interest rates do not rise, at first, as a result of the cumulative rise in the price level and the use of more and more loan funds. But the amount of interest payments made upon borrowed funds rises very rapidly as a result of the increase in the amount of capital funds borrowed by business enterprises during booms. These new capital funds are borrowed from banks and individuals. They are derived from savings and from new bank credit. During intense booms, the total interest payments increase much more rapidly than either the national income or the value of net production of industrial society. Over a long period of time, as a result of the development of capitalistic methods of production, capital investments in enterprises have grown more rapidly than either the physical volume of production or the value thereof. A large part of these new capital investments is in the form of loans. This tendency is

intensified during boom periods. The major portion of the increased interest payments goes to those who have very large incomes, and it is largely reinvested in additional loans.

Both agricultural and urban rents rise greatly during booms. In the war boom of 1915-1920, the prices of agricultural lands rose much more than the prices of agricultural products. Urban rents (industrial, business, and residential) also rise during booms, but usually their rise is less than that of the price level. When there exists a shortage of rental buildings, however, rental rates rise faster than the price level. Both families and business enterprises occupy more rental space during booms than at other times. A larger share of the money income is invested in new buildings under boom conditions than under any other conditions. Usually, the royalty rates on mineral production rise only slightly during booms, but the increased mineral production greatly swells the sum total of such payments. It is believed that, on a whole, rental receipts during booms do not rise any more than the total national money income, if even as much.

At no time, except during periods of depression, do business enterprises pay out all the earned money income (proceeds from the net production) to individuals. They usually hold back part of the profits as surpluses to be reinvested in the enterprises by the managers. In boom times, these withheld surpluses increase enormously, and absorb a large portion of the profits. The surpluses belong to the owners of the enterprises, and represent money income invested by them in the businesses, just as much as if the surpluses had been paid to them and reinvested in the businesses. The most disturbing feature of these boom surpluses is that they do not necessarily represent money received by the enterprises accumulating them. They sometimes represent accumulated stocks of finished goods not yet sold by the enterprises. But more frequently they represent accumulated stocks of raw materials and semifinished goods.

In some essential respects, the problem created by the corporate surpluses is different from that which arises from new cash investments in enterprises. These differences will be pointed out later.

The upward swing of booms upsets the balances of our industrial system in the following respects:

Because of rising prices, the pecuniary volume of sales rises faster than the physical output of all industry. As the physical volume of production increases, the output of producers' and capital goods rises faster than the output of consumers' goods. In a stabilized industrial system, where no new credit purchasing power is used, the pecuniary volume of sales will increase at about the same rate as the increase in the physical volume of output. If the industrial system is a mature and stabilized one, the output of consumers' goods will increase at a rate faster than the output of new capital goods—the reverse of the situation which prevails during a cumulative boom. Under stabilized conditions the production of producers' goods and consumers' goods will rise at about the same rate.)

(As long as the price level rises, the purchasing power (value) of the national money income rises more rapidly than does the value of the physical volume of *net production*. This condition is due to the fact that the current *output* of industry is sold at prices higher than those which prevailed at the time the goods used in production were purchased. Profits are an important element of the national income. The large profits made from selling the current output at higher prices cause a very rapid rise in the current national income. (Under a stabilized industrial situation, the purchasing power of the current national income and the value of the physical volume of current net production would increase at the same rate.)

(On the other hand, when the general price level declines, the value of the current net production declines more rapidly

than does the value of the current output of industry. Higher priced (valued) raw materials are then used to produce lower priced goods. For this reason, the current national income declines more rapidly than does the value of the physical volume of current net production. The purchasing power of the current national money income, then, becomes less than the value of the physical volume of current net production, but remains equal to the difference between the cost of the goods utilized in production and the sales price of the output. A very slow decline in the price level, however, does not measurably affect the equality of value between the physical volume of net production and the national money income. A rapid decline in prices, on the other hand, destroys the equality between them.

Probably the most important upset in our industrial balance resulting from booms is the disturbance of the workable ratio between spending and saving the national money income. This upset, we have learned already, is brought about largely by the very high profits and the relatively great increases in the incomes of large-income receivers, and the relatively small increases in the incomes of wage earners. As a result of the expansion movements characteristic of booms, places are easily found for the investment of these larger savings. So long as the industrial expansion movements continue, apparently the greater ratio of saving to spending does no harm. But, as we shall see in the next section of this chapter, the injurious effects of the increased savings become evident when the expansion movements end. And these movements always end.

As a matter of fact, it would be quite difficult, if not impossible, to spend all, or nearly all, the swollen money income for consumers' goods and services during the first phases (the rapid rise in prices and physical production) of booms. At such times, it would be impossible to increase

the output of finished consumers' goods and services as rapidly as the real money income rises. Under such conditions, an attempt to use all the money income to purchase consumers' products would result in ridiculously high prices for such goods and services. But, as we shall learn later, toward the end of boom movements the output of finished consumers' products increases much faster than the purchasing power of consumers' money income—the reverse of the prevailing situation during the earlier stages of booms. The significant point here is that the balance between the flow of consumers' money income and the production of finished consumers' products is upset by booms.

The credit inflation and the unbalanced industrial and business conditions produced by booms operate in such a manner as to bring the booms to an end. A discussion of why booms must end is taken up in the next section.

SECTION 2

FORCES WHICH BRING BOOMS TO AN END

The cumulative upward movement of a boom would go on indefinitely if it were not for the forces which inevitably come into play to destroy it. Among the forces set in motion by a boom, there are four that work toward terminating the upswing, and jointly they bring it to an inevitable close. These boom-destroying forces are: (1) profits are reduced because the cost of production rises rapidly after the boom passes its first stage of development; (2) the physical volume of production of finished consumers' goods, in the course of time, rises more rapidly than consumers' purchasing power; (3) enterprises accumulate larger and larger stocks of high-priced goods; and (4) much of the outstanding bank credit becomes unsafe and bank reserves may become exhausted.)

1. We have learned already that when prices first begin to rise, and production begins to expand, profits increase greatly. (The large increase in profits at such times is due,

first, to the widening of the margin between the cost of the raw materials used and the sales value of the output produced, and, second, to a relative decrease in the operating cost per unit of output as a result of more economical use of the productive equipment and factors. As the boom continues in its upward swing, the owners and operators of business enterprises lose both these profit advantages and are compelled to face new profit-reducing forces.

After the enterprises have used all the raw materials and other producers' goods they had on hand when prices began to rise, they are compelled to replenish their stocks of such goods at much higher prices. Since the prices of raw materials and of semifinished goods rise much faster than those of finished goods, the margin between the cost of producers' goods and the value of the output becomes less and less as time goes on and as prices rise higher. In due course of time, the margin of value between the cost of materials used in production and the sales price of the output will become less than it was before the boom started.

Whenever full capacity of operation of the existing productive plants is reached, it then becomes necessary to expand the productive capacity of these plants in order to continue to increase the output of goods. Expansion of plant capacity during booms causes a considerable rise in the operating cost of production per unit of product. At such times, new capital equipment is in very great demand, and the prices are quite high. As the boom cumulates, the cost of new capital equipment, in general, rises much faster than the value of the goods turned out. This is true largely because the prices of capital goods rise faster than those of any other class of goods. Near the end of booms, the cost of capital equipment is increased still further by the high interest rates upon the funds borrowed for its purchase.

(As booms continue to grow, less productive mineral deposits and agricultural lands will be brought into use, and

less desirable industrial and business sites will be utilized. Such movements will result in higher average costs of production in the enterprises participating in them. While wages do not rise so rapidly as prices, the personal efficiency of laborers decreases whenever a shortage of labor develops. During the World War boom, for example, there developed an acute shortage of labor, and much consequent inefficiency on the part of a large percentage of the laborers. Labor costs were increased greatly because of this low standard of efficiency. Management also becomes less efficient under boom conditions. The business disorganization resulting from booms, and the earlier large and easy profits, cause a letdown in the effectiveness of business managers.

All these profit-reducing forces, by working together, eventually bring about a situation in which the total cost of production rises faster than the value of the output. The elimination of prospective profits is then threatened. Since businessmen operate business enterprises primarily for profits, they will not further expand their productive operations unless prospective profits are satisfactory. When industrial expansion stops, further inflation of credit and prices also stops. The cumulative upward movement of the boom is over.

2. The reader will recall that at the beginning of booms, consumers' money incomes rise faster than the physical output of consumers' goods. This situation, however, does not prevail very long. The expansion of production of capital equipment and other producers' goods in the various links (industries) of the chain of production, in the course of time, results in a rapid increase in the output of finished consumers' goods. Since all productive activities are pointed toward the eventual production of goods and services to satisfy human wants, any increase in the physical volume of production of industry eventually results in a proportional increase in the volume of physical output of consumers'

goods and services. While the general physical volume of production, during the first part of a boom, rises much faster than the output of consumers' commodities, in later stages of the boom the reverse will be true. When that time arrives, the physical volume of output of consumers' goods will rise more rapidly than either the real national money income or the real purchasing power of consumers.

Prices of consumers' products may continue to rise, and usually do, for some time after the point has been reached when the value of the current output of those products exceeds the current real income of consumers. This is true because retail merchants continue to purchase heavily in order to replenish their stocks of goods; wholesalers and jobbers do the same; and all classes of middlemen find difficulty in getting immediate delivery of a sufficient quantity of goods to swell their stocks to desired proportions. The fever of speculation generated by booms causes most managers of business enterprises to endeavor to accumulate large stocks of goods. This speculation causes a continued market shortage of consumers' goods and a further increase in their prices. In the face of these facts, consumers are unable to purchase currently at prevailing prices, a physical volume of goods as large as the current output of those goods.

But, as time goes on, stocks of consumers' goods held by manufacturers and middlemen inevitably increase in quantity. Whenever they awaken to the fact that they have actually increased their stocks of goods beyond the current market demand for them, they do not directly become panic-stricken and offer to sell at lower prices. At first, each simply adopts a policy of buying less and selling the goods on hand at prevailing high prices. But manufacturers of consumers' goods feel the concentrated effect of the decreased buying policy of middlemen, and they proceed to curtail their output. They, too, endeavor to work off their surplus stocks of goods at high prices, rather than

to sell below the prevailing price level. No businessman will sell at cut prices unless he is forced to do so by his creditors, or unless, owing to falling prices, he is convinced that he will be forced to sell later at a still lower level. When a surplus of consumers' goods becomes an accepted fact, therefore, each dealer buys less and refuses to sell his own goods at prices lower than the prevailing ones.

The curtailment of purchases of capital equipment and raw materials by manufacturers of consumers' goods becomes so marked that the demand for the producers' goods which they purchase must decline. This decline in demand for producers' goods is transmitted to manufacturers of capital equipment of all kinds. Then, there is no further necessity for expansion in any of the links of the industrial chain, and the demand for capital equipment rapidly declines. The curtailment of demand for producers' and capital goods falls heavily upon producers of raw materials. The prices of raw materials and of capital equipment begin to decline because of the great and sudden decrease in the demand for various producers' goods. This is the explanation of why the inability of consumers to purchase the current output of consumers' goods during a boom will inevitably bring about the termination of the boom and initiate a general price decline. It is also an explanation of why a decline in demand for consumers' goods does not cause the prices of consumers' goods to fall prior to the decline in the prices of raw materials.

3. It was observed above that when the boom reaches a certain stage in its cumulative upward movement, there is an accumulation of large stocks of finished consumers' goods in the hands of business enterprises. At the same time, there is also an accumulation in their hands of large stocks of raw materials, semifinished goods, and other kinds of producers' goods. All these goods are bought at high prices, but they are bought because the purchasers believe that prices are going to rise still higher. A large part of the money paid

for the accumulated stocks of goods is borrowed from banks. The owners of the goods, then, owe the banks a large part of their cost, and can pay the loans only by selling some of the goods. Without the expansion of bank credit, such surplus stocks of high-priced goods would not and could not have been accumulated by business enterprises in general.

A considerable portion of the increased stocks of goods held by corporate business enterprises have been accumulated out of the corporate surpluses, rather than by means of bank loans. The high boom profits make it possible for many enterprises to acquire large stocks of goods without resorting to bank loans in order to do so. Often surplus stocks consist, in large part, of finished products of enterprises, either withheld from the markets awaiting higher prices or withheld from the markets to avoid breaking or glutting them with surplus goods. So long as prices continue to rise, the larger quantities of goods held by enterprises are not recognized as being "surplus" stocks. They are recognized as surpluses, however, when an effort is made to convert them into cash.

If enterprises continued to add to their stocks of goods held, or did not make an effort to decrease them, large stocks would occasion no serious business or industrial difficulties. But as soon as prices stop rising, most enterprises decide to lower their stocks of goods, either by selling the finished products held, or by discontinuing to replenish their producers' goods as they use them in production. The process of converting into cash the stocks of goods on hand not only increases the market supply of goods, but at the same time decreases the market demand for them. The effect on the market is the same, whether the surplus goods are sold in order to reduce outstanding bank loans, or whether they are sold merely to convert the corporate surpluses (of goods) into cash. An effort to dispose of surplus goods accumulated during the

boom will always be made by enterprises when the price level stops rising. Such action on their part will bring the boom to a close, and start a downswing in the trend of business and industry.

4. Finally, the point will be reached in the cumulative upward movement of a boom when banks are unwilling or unable to extend further the volume of outstanding bank loans. This situation arises either when the bankers consider additional loans unsafe or when bank reserves are reduced to the point where further expansion of bank credit is impossible. One or the other, or both, of these contingencies will occur before a boom runs its full course. When the expansion of bank credit stops, the upward movement of the boom must stop.

Prior to the establishment of the Federal Reserve Banking System in this country (1913), the inadequacy of bank reserves during boom periods always brought further expansion of bank credit to a close. The Federal Reserve System provided an elastic bank credit system, under which bank credit could be expanded much further than under the national banking system existing prior to 1913. In spite of the credit elasticity provided by the Federal Reserve System, however, bank reserves were exhausted in 1920 before the close of the war boom. While bank credit was not greatly expanded during the business prosperity period of the twenties, a situation developed in which it was considered unsafe to make many additional bank loans. The reasons bankers may refuse to make new loans when they have adequate reserves to do so are as follows:

While prices continue to rise, most businessmen and enterprises are able to pay easily all their obligations at the banks, if called upon to do so. They may sell part of their current or circulating capital and liquidate the indebtedness. So long, therefore, as prices continue to rise, and there is assurance that they will not fall, the customers' paper held by

banks is sound. But as the point of a recession in prices is approached, the paper held in the bills and notes files of banks becomes less sound, because as soon as the money value of the permanent and circulating capital of the borrowing businessmen and firms decreases, they are less able to meet their maturing obligations at the banks.

A loan to a business enterprise is in relation to the value of the enterprise as a going concern, and is secured by its current earning power. The soundness of the security behind loans to enterprises is determined by capitalizing the current and prospective net earnings of the business. A decline in actual or potential profits, which occurs concurrently with a decline in prices, thus brings about a decrease in the value of collateral (the business itself) which secures the loan. Under such circumstances, banks and other creditors desire payment, and are usually unwilling to extend the time of payment on already existing loans, or to make new loans to borrowers.

When the upswing of a boom is brought to a halt by the noncredit forces discussed in this section, further expansion of bank credit becomes unsafe. As soon as it is generally recognized that the upward trend of prices is over, the market demand for goods decreases and the market supply of them increases. Prices then begin to fall. Many outstanding bank loans become unsafe, and the banks demand that they be paid. The recession of the boom has begun; its nature and characteristics will be treated in the next section.

SECTION 3

CHARACTERISTICS OF BOOM CRASHES

Booms always end in business and industrial crashes. The most notable characteristic of recessions from booms is the rapid decline in the general price level. This precipitant fall in prices is accompanied by a rapid decline in outstanding bank credit, in the volume of sales, and in the

volume of production. While the expansion of bank credit is the means by which the price level is pushed up to boom proportions, the contraction of bank credit is partly a cause and partly a result of the decline in prices. A slight decline in prices undermines the security behind some bank loans and induces bankers to demand that they be paid off. In most of such cases, it is necessary for the borrowers to sell goods to obtain the funds with which to pay the loans. The forced sales push the price level still lower, and thus the contraction of bank credit becomes part of the cause for the fall in prices.)

As a result of the intensity and the rapidity of the downward movement following booms, many individuals, publications, and politicians make a persistent effort to find the individual or group responsible for the crash. When the hunt proves to be fruitless, the blame is placed upon the political party in power or upon that indefinite group known as "Wall Street" or the "Money Interests." It is assumed by a large part of the public that boom conditions are normal conditions. They are unable to understand why "prosperity" (the name given booms) cannot prevail indefinitely. They think, therefore, that someone must have thrown a monkey wrench into the gears of industry and business to bring about the terrible crash.

Even though no definite group is located which, in the public mind, must shoulder the blame for the crisis, there is a widespread demand that the government speedily do something to bring back "prosperity." It is at such times that "bank reform bills," "price guarantee bills," "paper money bills," "farmers' aid bills," bills to encourage exports, and other bills in some way designed to stop the decline in prices, are introduced in Congress. In spite of Congressional proposals and enactments, the general decline in business and industry continues upon its rapid and dramatic course.

During the crisis of 1920-1921, a great number of people, including some members of Congress, admitted that prices

were entirely too high, and that they should be reduced, but they wanted the price level reduced gradually over a long period of time. It was claimed that, by pursuing such a policy, each business enterprise could easily adjust itself to gradual liquidation. The advocates of this plan maintained that the Federal Reserve Board was largely responsible for the rapid decline in prices, because it refused to extend further credit to the agricultural interests in the fall of 1920, for the purpose of temporarily withholding crops from the markets.

Taking into consideration the declining purchasing power of Europe at that time, the accumulating stocks of finished products in our markets, and the elimination of profits in many lines of business, due to the increasing cost of production, it is extremely doubtful if the Federal Reserve Board could have maintained the general price level by granting the most liberal extension of credit—assuming that the credit was available to be extended. In the spring of 1920, the silk market broke with disastrous results to certain Japanese banks. During the following summer, the cotton and woolen textile markets went to pieces, and the shoe and leather markets rapidly declined. The prices of securities on exchanges had been declining from the beginning of the year, and the so-called buyers' strike, with its vigorous protest against high prices, had cooled the speculative fever which had run so high in the spring of 1920. In every respect the situation was ripe for a general break in prices.

Due to the lack of additional cash reserves, the Federal Reserve Board was unable to expand credit further without greatly endangering the whole Federal Reserve System. The Reserve banks had reached both the legal and the practical reserve minimum, and it became necessary to announce officially to the public this already evident fact. The official announcement by the Board unquestionably facilitated the crystallization of the yet vague public opinion

that a general price break was imminent. And so it came with a rush.

Of course, there are causes for these boom crashes or crises. These causes, as we learned in the previous section of this chapter, are inevitably developed by the booms themselves. The businessmen responsible for the initiation and cumulation of the booms are responsible for the consequent crashes which follow them. This classification would include practically all business managers and bankers. Because of the innate characteristics of our business system and the nature of bank credit, it is not possible, at the end of a boom, to make the necessary business, industrial, and credit readjustments in a slow manner. At that time, excess stocks of goods and heavy bank debts must be liquidated. As a result of the nature of our price and profits system, surplus goods and credit cannot be liquidated without a great deal of public injury and widespread private losses; nor can they be liquidated in a slow and painless manner.¹

(Under conditions of great inflation of prices and credit stringency, therefore, there cannot be a slow liquidation of credit and values. The fact that all business is organized for profit, and the further fact that self-protection is one of the primary instincts of all mankind (including businessmen), make such a slow movement impossible. The acceptance of lower money values for goods acquired under conditions of higher money values means either the loss of money profits or the sustaining of losses in terms of money. Under conditions of impending price declines, therefore, each businessman endeavors to acquire only the necessary minimum quantity of goods, and to dispose rapidly of all the goods he has for sale, before prices and values decline further. It is only by so doing that he can minimize losses of profits and capital value. At the same time, this general disposition on the part of each businessman causes a great dearth of buyers in all primary and wholesale markets, and thus

produces market gluts. Prices therefore decline with a rapidity which depends upon the extent to which actual demand in the market is exceeded by the physical supply of goods offered there.)

When prices decline following a period of marked credit inflation, the goods offered in the market greatly exceed the physical quantity demanded, because there are very large stocks of goods in the hands of sellers who want to sell them. This situation causes each business firm and businessman to buy less and endeavor to sell more. (Everyone desires to buy less because of shortage of purchasing power, and because he is certain that prices will soon fall much lower.

✓ He desires to increase his own sales immediately, before he is compelled to take much less for his goods.)

The inflated condition of bank credit and the desire of bankers to protect themselves against losses at such times are also powerful influences in bringing about a rapid decline in prices. The bankers are anxious for each of their borrowers to remain able to pay his loans at the banks. Under such conditions, the very best proof of ability to pay off a bank loan is the actual payment of the loan. Consequently, banks urge most of their customers to convert their liquid assets (stocks of goods) into cash and pay their notes. At the same time, bankers advise their borrowers against further borrowing for the purpose of purchasing additional goods. If a debtor businessman is not disposed to liquidate his business at such a time, therefore, he is likely to be urged or forced to do so by his banker, in order to protect the interest of the bank.

Nominal money losses are inevitable under such conditions. Nominal capital values must be deflated along with the decline in the price level. But most of this loss of nominal value must fall upon the business enterprises and businessmen; the banks are able to stand very little of it. The latter make loans in terms of a certain number of dollars,

and must be repaid the same number of dollars. Otherwise, they suffer an irreparable net loss. The business enterprise may suffer a loss in the nominal value of its capital equipment, and still have the same quantity and quality of physical capital that it had before the boom started. The banker feels morally, as well as legally, justifiable in forcing borrowers to liquidate their businesses in order to pay off their loans.

Bankers do not force all their customers to liquidate and pay off all loans during periods of liquidation. There are certain customers who, because of their financial strength, are able to stand much shrinkage in value without impairing their ability to pay their obligations at the banks. These customers are not urged to meet their obligations because their paper is considered safe. There are others who would be unable to pay all their obligations at the banks should they liquidate at prevailing prices. The banks often carry such borrowers with the hope that prices will improve, and that those borrowers will be able to pay in full at a later date. Such loans may be called "frozen" loans.

The decline in the volume of production is an inevitable consequence of both the decline in the volume of sales and the rapid fall in prices. Full capacity output of enterprises cannot be sold at prices equal to the cost of production. As a matter of fact, the goods which are placed on the markets are usually sold at prices below the cost of production. At such times, prices fall much faster than the cost of production. Boom crashes, therefore, result in a rapid fall in production, employment, and money incomes. The smaller volume of production, and the smaller money incomes, reduce further the volume of sales. The downward movements of booms become cumulative, just as do the upswings.)

(The decline in the volume of production is not uniform in all industries. In the agricultural industry, there is little or no decline in production as a result of boom crashes, while

in most mining and manufacturing industries the decline in production is very great. On the whole, the decline in the production of raw materials is much greater than that in the production of finished products; the decline in the production of producers' goods is larger than that in the production of consumers' goods.)

(Both business failures and bank failures are very numerous during crises and immediately following them. This condition is due to the terrific losses sustained because of the break in prices. The purchasing power of the national money incomes does not decline so fast as the physical volume of production; nor does the physical volume of retail trade or the real money income fall so fast as the physical volume of production. Consumption tends to exceed production during the depressions which follow crashes. These relationships will be considered in greater detail in the chapter on depressions and recoveries.

CHAPTER VII

NONBOOM BUSINESS DEPRESSIONS

SECTION 1

GROWING MATURITY OF OUR INDUSTRIAL SYSTEM

In the second chapter of this book we learned that, under the conditions of a stable price level, the following propositions are true: (1) the purchasing power of the total money income equals the value of the physical net production (the net product value); (2) the money income purchases a quantity of consumers' and capital goods having a value equal (no more and no less) to the net product value of industry; (3) regardless of the exact proportion in which the money income is used to purchase consumers' goods on the one hand and capital goods on the other, if all of it is used to purchase one or the other of these two classes of goods, the general market demand for goods equals the market supply of them (the current physical production); and (4) industrial production, for a time, becomes adjusted to the production of new consumers' goods and new capital goods according to the ratio at which the money income is used to purchase these two classes of goods.)

It was also stated in the second chapter that, (in case a very large portion of the income is saved and invested for further production, there eventually develops an excess capacity of production in the consumers' goods industries. When this contingency arises, not all that portion of the money income ordinarily used to purchase new capital goods is so used; nor is a larger portion of the income used directly to purchase consumers' goods. On the other hand, there develops a market surplus both of consumers' goods and of

capital goods, as well as a surplus of investment funds. In short, not all the money income is used to purchase both classes of goods, and there exists a market surplus of goods in general. As a result of such a situation, a business and industrial depression follows.

It is believed that a business and industrial condition somewhat similar to the one described above has tended to develop in this country since the first decade of the twentieth century. The principal European nations, it is also believed, were confronted with such an industrial condition before the beginning of the World War. In the present chapter, an explanation will be given as to how and why modern industrial society develops the overinvestment-underconsumption malady. The chief object of the chapter is to show how and why the malady came to a head in the United States in 1929. It will be pointed out, incidentally, that it came to a head in some of the European countries at an earlier date.

The most notable economic accomplishment of any people of modern times was the development of the great industrial system of the United States. Less than two centuries ago, the country consisted of thirteen sparsely settled agricultural colonies. Today, it is a nation of 125 million people, with the most diversified and the most productive industrial system yet developed by any nation. In 1787, our people were confronted with the task of exploiting, settling, and developing the larger part of the North American continent, as well as that of building a modern industrial system. Today, those tasks are pretty well completed.

Until about the end of the nineteenth century, the two factors which played the greatest part in retarding the rapidity of our economic and industrial growth were a shortage of capital funds and a shortage of labor. Because of the variety and magnitude of the opportunities the country afforded for industrial development, we were unable

to save and accumulate currently large enough capital funds to take immediate advantage of the attractive opportunities for settling new territories, building new industries, and expanding and improving old ones. It was the inadequacy of actual savings from our incomes that was largely responsible for the frequent and extensive use of bank credit as new capital funds. In order to augment our labor supply we received each year a large number of immigrants from other countries.

New capital funds were inadequate neither because we, as a people, were unable to make large savings from our national money income, nor because our current money income was relatively small. During the colonial period, as well as since then, our per capita production and income has been larger than in any other country. The portion of the annual national income saved and productively invested have also been larger in this country than in any other. It was the enormity of the new capital funds required for the rapid growth of our industrial development that was responsible for the current shortage of funds. During most of the time, there were industrial and business opportunities which offered prospects of large profits to those who were able to make the necessary capital investments.

Nor was the persistent shortage of labor in this country up to 1907 due to a lack of natural growth in our population. For more than a century we had the most rapid natural growth of population of any nation. Our labor shortage was due, first, to the great magnitude of our unutilized natural resources (land and minerals) and, second, to the rapid growth of our industries in proportion to the increase in our population. It was the scarcity of laborers relative to the increasing demand for them that caused the labor shortage. The rapidly growing demand for labor was due to the very swift growth of our economic development. As a result of the abundance of land and other natural

resources in colonial days, the per capita production and the production per laborer was then very high. Because of the relative scarcity of laborers, and the existence of free land at that time, wages were also high.

From 1850 to the present time, the United States has led the rest of the world in the invention and use of powerized machinery. The principal causes of this leadership in the mechanization of production have been the relative scarcity of labor and the high wage rates prevailing in this country. Laborers in many industries have been partially displaced by the machines (capital) because these machines, as a factor of production, are cheaper than laborers. As a result of the expanding use of machinery and the rapid improvements in its character, production per laborer has increased greatly. This larger production per laborer has resulted in a larger net production (money income) per inhabitant. The use of more machinery in production has made it possible for enterprises to pay still higher wages to employed laborers.

Until about 1876, both the wealth and the income in this country were fairly well distributed among the people as a whole. There were no very large private fortunes, and there were few paupers. Prior to that date, and for some years following, wage rates continued to rise along with the increase in production per laborer. So long as laborers had the choice of taking up free land in the West or working for employers, wages continued to rise. Competition among employers for the limited supply of labor, so long as there was a shortage of labor, kept wages increasing with the increase in production. Again, before the development of monopolistic control in big business, competition among enterprises in each industry, over a long period of time, kept prices from rising very much above the cost of production. Except during boom periods, therefore, industrial profits were not exceptionally high in well-established industries.

This, of course, was not true in the newly established industries.

After 1876, the following factors in our national economic and industrial life operated to facilitate greater concentration of the ownership of productive capital in the hands of a few people, as well as to bring about more unequal distribution of the national money income: (1) the disappearance of free land and other free natural resources; (2) the wider and wider use of automatic machinery to displace laborers in production; (3) the increasing monopolistic control over prices and production in the principal productive industries other than agriculture; and (4) the growing concentration of control over large business enterprises in the hands of a few people, and the enormous increase in the incomes of these few individuals. Each of these forces tended to decrease the portion of the national income received by the small-income receivers, and to increase the portion of it received by the large-income receivers. By doing this, these forces operated to bring about the ownership of an ever increasing portion of the productive capital of the nation by a very small portion of the people.

Both the disappearance of free land and the wider use of improved automatic machinery had the double effect of limiting the number of jobs for laborers and decreasing the real wages in proportion to the value of the current industrial production. More extensive use of machinery had the additional effect of decreasing the cost of production per unit of product and, at the same time, of increasing the volume of production. The growing monopolistic control in the major industries enabled the business enterprises in those industries to increase their profits by holding up the prices of their products, regardless of the decreased cost of production. Ownership of the bulk of common stock (the high profit-receiving shares) of the majority of large and profitable corporations by a few individuals, of course,

increased these individuals' incomes enormously.¹ These individuals could find only a limited use for such gigantic incomes, other than to reinvest the bulk of them in new productive capital.

The size of business enterprises in each industry grew as a result of the mechanization of methods of production, the standardization of the character of products, and the widening of markets. Large-scale, standardized production necessitated the building of larger business enterprises to perform such productive and sales functions. The corporate form of business organization was well suited to the development of larger enterprises. As the size of the enterprises in each industry increased, the number of the enterprises engaged therein tended to decrease. In the principal industries, the field of activity for most enterprises became national and international. The management of the new large enterprises, meanwhile, became highly concentrated in the hands of a few individuals, and the management of each became impersonal in its relations with employees and with the public. By 1882, monopolistic combinations of large enterprises began to appear in some of our major industries. After 1890, this monopolistic tendency in the mineral and manufacturing industries grew at a rapid rate.

The advent of big corporate enterprises controlled by voting shareholders or stockholders, and owned by all share- and note- and bondholders, was accompanied by a rapid concentration of ownership, as well as control, of the productive capital invested in these big enterprises. Frequently, through reorganizations, consolidations, and mergers, the major portion of the voting (and unlimited dividend-paying) shares of stock in the large enterprises was acquired by a few individuals. These persons thus obtained the greater portion of the profits of these enterprises, and thereby acquired enormous individual incomes.

¹ Read Chapters III, IV, and V of *National Economic Security*, by the author.

Many of the great private fortunes of today were built up in this manner. Others were built through the founders' acquisition of cheap but rich natural resources, which later proved to be very valuable. Still others were acquired by their originators' development of profitable new industries.

While the four forces discussed above brought about a more unequal distribution of the fruits of industry (the national income), they did not, at first, retard either the growth of production or the increase in national income. On the contrary, each of them, except the disappearance of free land, facilitated the continued increase in the volume of production, as well as in the total money income. The wider use of automatic machinery expanded the power of industry to produce with a given quantity of capital (dollar value) and a given number of laborers. The monopolistic prices increased the profits of industry, and the concentration of control gave the major portion of those profits to the very-large-income receivers. The extremely large incomes of the few not only made it possible, but actually necessary, for the nation to invest a large portion of the national income in new productive capital. After the effects of these forces had been felt, the nation experienced its most rapid increase both in production and in national income.

Under the conditions of growing inequality in the distribution of the national money income, the nation rapidly approached maturity in the development of its industrial system. By 1907, our industrial system had reached a point at which most of our major industries were developed to the stage where they had a capacity of production in excess of the quantity of products which could be sold at prevailing prices. This was the principal reason why, following the crisis in 1907, business continued in a more or less depressed condition until the opening of the World War in 1914, at which time another crisis occurred.

From 1908 to 1914, various reasons were given by commentators on business conditions, as well as by politicians, as to why business did not "go ahead" as it had prior to 1907. It was said by some that changes in our tariff policies were the cause of the business "stagnation" of the time. Others claimed that impending changes in our banking and antitrust laws were responsible for the situation. Still others maintained that the unfavorable political and economic conditions in the European countries were reflected in American business. But the real cause was the lack of good markets (both domestic and foreign) for all the products we were capable of producing. The fact that the mass of the American consumers had suffered a decrease in their purchasing power, in proportion to the value of current production, was the chief cause of the weakness in the domestic demand for the products that industry, at that time, was capable of producing.

The opening of the World War in 1914 gave to our industrial system a new, but temporary, lease upon its ability to operate at full capacity under conditions of increasing unequal distribution of the proceeds from production (money income). The unprecedented European demand for American goods of all kinds and the large American loans to European countries, which were occasioned by the war, greatly stimulated our business before we actually entered the war in 1917. Then, the European war demands for our goods were augmented by our own war demands. The great inflationary war boom was the result of the World War demand for our goods.

In the next section of this chapter will be found a discussion of how the devastating depression of 1929 occurred as a result of the overinvestment-underconsumption period which preceded it. How and why our economic balance was upset by this maldistribution of the national money income will then be pointed out.

SECTION 2

GENERATION OF A NONBOOM DEPRESSION

Except during the business recession of 1920-1921, the United States made very rapid strides from 1915 to 1929 in expanding the capacity of production of its industrial system. We have already learned that the war boom brought about an unprecedented increase in the demand for all kinds of goods, and a consequent large increase in the volume of production. At that time, disregarding the rise in prices, there was a rapid increase in the physical volume of both gross and net production. As a consequence of the great rise in the physical volume of production, there was an equal increase in the real national money income. Following the business and industrial recession in 1920-1921, a rise in the physical volume of production almost equal to that of the war boom was resumed and continued until 1929.

This long period of fast-moving industrial expansion was not only initiated by a strong market demand for the products of industry, but was supported by such a market demand until almost the end of 1928. During and immediately following the war, the expansion of bank credit furnished a part of the purchasing power to support the growing market demand. But, even during the inflationary boom period, the larger part of the increased purchasing power used to make the greater market demand effective was derived from the growing national money income. Practically all the purchasing power used to sustain the demand for goods from 1921 to 1929 was derived from the current money income, as is shown by the fact that bank credit was expanded very little then. The chief object of this section is to point out why, in 1929, the current national money income failed to support the market demand for the products our industrial system was capable of producing.

While the growing market demand for the products of industry was a necessary prerequisite to the industrial expansion of the period, there were three other factors which greatly facilitated both the rapidity and the magnitude of this movement. These three factors were: (1) the rapid improvements in the technology of production and the greater use of automatic machinery; (2) the growing monopolistic control over the prices of industrial products; and (3) the rapid growth in the incomes of the very-high-income receivers.

It has been observed already that improvements in the mechanization of production methods prior to the war resulted in a rapid increase in the volume of production. This same movement, from 1915 to 1929, played a large part in making it possible to expand production more rapidly than ever before. In the previous discussion of the effects upon laborers of the more extensive use of automatic machinery, it was pointed out that the demand for labor in each enterprise is thereby decreased. Finally, the point was reached in the twenties at which, notwithstanding the enormous increase in the physical volume of production, laborers were displaced in enterprises by machinery more rapidly than they were absorbed by the expanding volume of production. In 1929, there were fewer laborers employed in the mechanized industries than in 1922, though the volume of production in those industries was more than one-third greater in 1929 than in 1922. Because of this fact, and also because of the natural increase in the working population, there were some three million laborers unemployed in 1928, at the height of business prosperity.

We know also that, before the war, the growth of monopolistic control over prices enabled business enterprises to make larger profits, and that a great portion of the profits of the large enterprises was paid to a few large-income receivers. From 1915 to 1929, both these movements were

more intensified than ever before. In short, the twenties were a period of greater profits and more unequal division of the national income than any previous peacetime period. A much greater portion of the current money income was saved and invested in productive enterprises from the beginning of the World War to the end of the period of business prosperity in 1929 than ever before in our national history. These great savings were made possible largely by the high profits and the growing inequality in the division of the national income; they, in turn, supplied the new capital funds necessary for the unprecedented expansion of the production capacity of our industrial system.

The surplus supply of labor created by automatic machinery kept the wage level of laborers from rising along with the increase in industrial production per worker. Viewed from the other side, the wider use of automatic machinery enabled enterprises to reduce the cost of production per unit of product by making large savings on labor costs. Mainly as a result of monopolistic restraints over prices in most of the major industries, the prices of the products of those industries were not lowered in proportion to the reduction in costs. If they had been so lowered, the real wages of employed laborers would have been increased somewhat in proportion to the increase in the physical volume of net production (national money income). But since the margin between prices and the cost of production was thus widened, the profit element was greatly increased. Wage earners thereby secured a smaller portion of the national income, while profit receivers obtained a larger portion of it. In proportion to the current physical volume of net production, the current incomes of very-large-income receivers were increased, while those of wage earners were decreased.

Because of the very high prices of agricultural products during the war boom, the real money income of the agricultural class was increased more than the rise in the physical

volume of agricultural production. But this situation changed drastically in 1920, when the prices of agricultural products declined much more than the prices of other classes of products. From 1921 to 1934, the prices of agricultural products were much lower, relative to the prices of other classes of products, than they were previous to the World War. Notwithstanding the relatively low prices of agricultural products during the twenties, at that time, the volume of production of those products increased very much. The real income of the agricultural classes during the twenties, in relation to both the net production of our industrial system and the total purchasing power of the national income, was lower than ever before. In 1929, the agricultural population constituted about 29 per cent of the total, but received only about 18 per cent of the total national income. Thus, the real income of another large class of income receivers failed to keep pace with the increase in the national physical volume of production or with the real national income.

It is quite evident that, during this period, when both the physical volume of production and the real national income grew rapidly, the portion of the national income which went to the mass of small-income receivers greatly decreased. It is equally evident that the portion of the income which went to the very-large-income receivers rapidly increased. Since the large-income receivers were able to use only a small portion of their incomes to purchase consumers' goods and services, they were forced either to hoard or to invest the major portion. The savings of such income receivers, together with some bank credit during the war, furnished the investment funds for (1) the new capital used in the expansion of industry, (2) the purchase of the new government securities, (3) the purchase of foreign securities, and (4) the consumption loans to small-income receivers. These investment funds, in turn, were used by the borrowers to

purchase both producers' and consumers' goods. So long as all the investment funds were so used, the current market demand for goods equaled the current supply (production) of them.

During the war boom, many billions of dollars of new capital funds were placed in business enterprises to enable them to expand production. All these new investment funds were either used to purchase producers' goods directly, or paid out as wages to workers engaged in the new construction. The portion paid as wages was used, in turn, to purchase consumers' goods.

About twenty-four billions of dollars of new Federal Government securities were issued during the war, and at the same time American investors purchased about eight billions of dollars' worth of foreign securities and American securities held abroad. All the funds received by our government for the securities sold were either loaned to foreign governments or used to prosecute the war. Our war expenses consisted of the purchase of war goods and the payment for services, both constituting a demand for goods. The proceeds of the foreign loans made by us (both public and private) were spent in this country to pay for exports. Our excess of exports over imports about equaled our foreign loans for the period. Again, from 1921 to 1929, American investors purchased about eight billions of dollars' worth of additional foreign securities, and our excess exports for the period amounted to about the same figure.

During the business prosperity period of the twenties, more than one hundred millions of dollars of new investment funds were placed in business enterprises and in new private construction. As there was practically no expansion of bank credit at this time, these funds came from current savings. They were spent for producers' goods and wages in carrying out the industrial expansion and construction program. The state and local governmental units at this

time also borrowed eight billions of dollars for highway and other public construction. This was done for the benefit of future generations, and was to be paid for by our children and their children. Nevertheless, the loans caused a current demand for goods equal to the amount of the loans.

A large part of the funds used to construct private homes in the twenties was borrowed by the homeowners. They agreed to pay the interest and the principal of the loans from their future incomes. A considerable portion of the future incomes of many small- and medium-income receivers was thus mortgaged to the larger income receivers. Furthermore, the mortgaging of future incomes by small-income receivers did not stop at buying homes. Many of them bought automobiles, radios, and other consumers' goods upon the installment payment plan. They agreed to pay for the goods and the carrying charges out of their future incomes. Most of this installment paper (promissory notes secured by chattel mortgages) was purchased by banks and investors, just as they purchase commercial paper. Outstanding installment notes increased about eight billions of dollars from 1921 to 1929. This amount represented a mortgage on the future incomes of consumers; it represented that much expenditure by them in excess of their current incomes. Installment sales are simply consumption loans made to consumers by investors. The loans can be retired only by the consumers' reducing their future expenditures by the amount of the loans.

The business prosperity of the twenties might have continued indefinitely if all those having surplus incomes had continued to invest them as they did until 1928. Factors developed, however, which caused them to refuse to invest their savings as they had been doing. The chief disturbing factors which developed in the late twenties were four in number. (1) Investors began to suspect the soundness of the new foreign securities offered for sale in our markets.

(2) Owners found it impossible to rent at reasonable rates all the newly completed buildings. (3) A large excess capacity of production became evident in most of the consumption goods industries. (4) Part of the outstanding installment paper proved to be unsound. Each of these factors was an inevitable development in the situation, and each worked toward bringing business prosperity to a close.

The weakening of faith in the soundness of the foreign securities offered in our markets caused a decline in the volume of sales of such securities. The decline in the foreign securities purchased by Americans caused a corresponding decline in our export trade. Our excess exports, it should be remembered, were financed through the sale of foreign securities here. Furthermore, as soon as it was realized that many of our cities had overbuilt, and that further building loans or investments were not sound, such investments declined and new construction fell off.

When it became evident that the majority of our industries had reached a capacity of production much in excess of the quantity of goods which could be sold at prevailing prices, it was not profitable to make additional investments for the purpose of further expanding the productive capacity of those industries. Consequently, industrial expansion declined along with the decline in such investments. Then, recognition of the weakness of much of the outstanding installment paper precipitated a fall in the demand for such paper for investment purposes. This brought about a decline in installment sales.

Previous to the break in the stock market in the fall of 1929, a large amount of the surplus investment funds were loaned on the stock market by the individual owners. A considerable portion of them, also, were deposited in banks as time deposits. Then, too, many outstanding bank loans were liquidated with funds which might otherwise have been used as new investment funds.

As the market demand declined for the four classes of goods enumerated above, the volume of production also declined. The drop in the volume of production caused a fall in employment and in consumers' money income. This decrease in income resulted in another decline in sales and in production. When the break in the stock market occurred in 1929, sales and production of commodities had already begun to decline. The break in the stock market was only a general recognition of the beginning of the great depression.

SECTION 3

ECONOMICS OF UNDERCONSUMPTION RECESSIONS

It was inevitable that our industrial system, in its growth, would reach a stage where the value of the current output of consumers' products would rise faster than the purchasing power of consumers' money incomes. (In order to keep a balance in our industrial system during a growth in volume of production, an increasing portion of the money income must be used to purchase consumers' products. In other words, as a result of the approaching maturity of our industrial system, it is not possible, for an indefinite period of time, to use a large percentage of the national income to acquire new capital for further production. To retain an industrial balance, the portion of the income so used must decrease with the advancing maturity of the industrial system.)

As previously stated, the social purpose of all business enterprises is to produce goods and services, either directly or indirectly, for the satisfaction of human wants. Whenever the various industries in the chain of industrial production are fairly complete in their development, only a small amount of new capital is required to increase the production capacity of the industrial system. Establishment of new industries, furthermore, requires less new capital outlay in countries of highly developed industrial systems

than it requires in those which are industrially undeveloped. To establish the electric-refrigerator industry in a new country would necessitate the establishment and development of the various manufacturing industries that furnish the equipment and materials used by the electric-refrigerator industry. This would not be the case in a highly industrialized country. After the basic industries (metals) and capital equipment industries are well developed in a country, not a great deal of new capital investment is required to establish new finished goods industries or to expand the productive capacity of old ones.

(The current productive capacity of a mature industrial system should increase as fast as the real incomes of consumers, but little or no faster than these. This ratio between the growth of productive capacity and consumers' real incomes should determine the correct proportion between the spending and the investment of the current national income. If too large a share of it is spent, higher prices and a shortage of goods will result. If too large a share of it is invested, lower prices and a surplus of goods and production will eventually result. It is clear that as an industrial system becomes more mature in development, the investment of a smaller and smaller portion of the current income in new capital will prove sufficient to preserve the balance between the growth of productive capacity and consumers' incomes.) But as the industrial system of the United States became more mature, actually a larger and larger portion of the income was invested in new capital. For this reason, productive capacity grew much faster than consumers' incomes.

After we had reached a stage in our industrial development, however, where both productive capacity and actual production increased more rapidly than consumers' purchasing power, neither prices nor production immediately declined. On the contrary, we continued to increase both

productive capacity and actual production for many years. As already pointed out, we did this by investing an increasing percentage of the national income in (1) new capital equipment and goods, (2) new buildings, (3) loans to the government, (4) foreign loans, and (5) consumption loans to small-income receivers. As a consequence of this use of large savings, there occurred the great depression of 1929 with all its terrible consequences.

The large investments absorbed what would otherwise have been surplus goods. So long as all the savings were thus invested, we were able to keep our industrial system operating at a reasonable percentage of its capacity of production. This use of the savings, then, created a sufficient demand for goods to keep our industries going. In the course of time, however, we know that these uses of the large savings proved to be not only unprofitable, but actually unsafe. Because of this fact, a large part of the excess savings were withheld from these investment fields. Then industrial and building expansion ceased, foreign trade fell off, and installment sales declined.

Great Britain, of course, was the first nation to develop modern industrialism, and as a result was the first one to secure a large favorable balance of trade. Her favorable trade balance became large at about the beginning of the nineteenth century. This favorable trade balance was supported by extensive investments in foreign countries. The bulk of the exports of the country were in manufactured products—both producers' and consumers' goods. Those with large and growing incomes supplied adequate foreign investment funds to finance the favorable trade balance. As time passed, the British nation, as a result of heavy foreign investments, obtained a large money income from other nations in the form of interest and profits payments. As a consequence of the rise in foreign payments on British investments, England's favorable balance of trade dis-

appeared. Then, for several years previous to 1914, her trade balance was unfavorable, but her international balance (money payments) was still favorable. With this favorable international balance, the nation continued to make extensive foreign investments.

After the development of an unfavorable balance of trade, the people of the British Isles domestically consumed and converted into new capital a greater volume of goods than they produced. Because of the rapid industrialization of the United States and Germany and as a result of the increase in exports from those countries, foreign competition among Great Britain, the United States, and Germany became acute. These nations not only competed in the sale of fabricated goods in other countries, but they competed also in the placing of foreign loans. Each nation was searching for foreign territories in which to invest its surplus goods and in which to sell its surplus products. In each of these countries, there was a surplus of both fabricated goods and investment funds. Industrial expansion, as well as the increase in the volume of production, in each of these countries, was retarded by a lack of suitable foreign markets in which to dispose of both surplus goods and surplus investment funds. It was this scramble for foreign markets which led to "spheres of influence" and financial control of other nations by these three major industrial nations.

Because of the unequal manner in which the national income in each of these nations was distributed among the people, none of them could depend upon an increase in the purchasing power of their own people to support the market for the increasing quantity of products of their own industries. Without extensive foreign markets in which to dispose of a large part of the products of their industries, it would certainly have been unwise to use all their surplus investment funds to expand the productive capacity of their industrial systems. In order to sustain their indus-

trial progress, then, the business and industrial leaders of each of these nations realized that they must find foreign fields in which to dispose of both surplus goods and surplus investment funds.

The World War, of course, stimulated both business and industry in all the neutral nations, as well as in those at war. Government credit and currencies were expanded greatly in all the European countries (except Switzerland) to finance participation in the war. All the investment funds of each European nation, during the war, were used at home as loans to the government or as investments for industrial expansion. The high prices and high profits caused by the war conditions in each nation resulted in greater concentration of a large part of the income in the hands of a small number of large-income receivers. During the war, England and Germany lost much of their foreign trade (exports) along with their reduction in foreign investments.

When the war boom crashed in England in 1920, a deflationary crisis and depression followed. The English depression which started at that time continued moderately until 1929, when it became worse. Following the close of the war, Germany went through a paper-money inflationary debauch and crisis. But because of the reparations payments and the foreign loans obtained by the Germans, business was fairly active in that country during most of the twenties. But the financial situation in the country was strained from the close of the war until 1929, when all reparations payments stopped. German industrial and business conditions became worse as a result of the 1929 depression.

The lack of recovery of the European countries from the depression in 1920 was due primarily to the relative decrease in the purchasing power of the mass of consumers in each of those countries. It was due secondarily to the curtailed foreign investments and exports by these countries. England had idle factories and unemployed workers because her

enterprises were unable to find adequate markets for the products they were capable of producing. Adequate foreign markets could not be found because British investors were unable to make new foreign investments sufficient to finance a large volume of exports. This condition prevailed partly because they had sold many of their foreign investments during the war, and partly because of the high afterwar taxes at home. The incomes of the mass of home consumers were too small to permit them to buy larger quantities of goods in the domestic markets.

England then adopted a dole system of supporting from the public treasury the great army of unemployed workers, rather than giving them an opportunity to support themselves by productive work in private industries. Both self-support of the unemployed and an increase in the volume of production could have been accomplished by the adoption of the following policies: (1) an increase in the real wages of laborers (giving a larger share of the national income); (2) an absorption of the unemployed in private industry by decreasing each laborers' hours per day and increasing the hours of operation of all the industrial plants. The resulting rise in net production (real national income) would have been sufficient to pay the additional labor cost entailed by the higher wage rates and the greater number of employees. On the other hand, the dole system forced industry, through taxes, to support the unemployed in idleness from the proceeds of a smaller national net production (income). In short, the large-income receivers lost much more through the dole system than they would have lost by increasing wages, shortening hours, and operating industry at a fuller capacity. Considering the industrial situation, they would have gained by the adoption of the latter policies.

The attitude of the business leaders in England during the twenties, with reference to increasing wages and reducing hours of labor, was in no way different from that of the same

class in other countries. As we shall see later, the attitude of the industrial leaders in America in 1935, with reference to these problems, was the same as that of the English leaders in 1921. When the problems of unemployment and shortage of consumers' income became acute in Italy and Germany, those countries adopted fascism, or dictatorship. But, apparently, they have not yet satisfactorily solved these income and labor problems through the kind of dictatorship they adopted.

(The nature of an industrial and business recession brought about by an overinvestment-underconsumption situation is similar in many respects to a recession following an inflationary boom. As soon as investors stop expanding, there follows a decline in industry, sales, production, and prices. The national income consequently decreases, and there is further contraction of sales, prices, and production. The downward movement becomes a cumulative one. Profits disappear, goods are thrown upon the markets, and outstanding bank credit is contracted as it is in the other type of business recession. During all business recessions, extreme caution and fear become the order of the day among businessmen.)

(Overinvestment depressions differ from boom depressions in that they commence at a much slower pace than do boom depressions. They do not start with dramatic crises or panics, but begin with a slow downward trend of sales and production. When the stage is reached where liquidation of outstanding bank credit and falling prices are brought into play, such depressions gain speed in their downward swing. After gaining momentum, they may develop into crises or even panics. On the other hand, boom depressions always start off with crises, which are frequently accompanied by panics.)

(The problems of recovery from overinvestment depressions are far more difficult than those of recovery from boom

depressions. As already indicated, the problems of recovery from the former type of depression involve questions of a redistribution of the national money income, while those of the latter type do not. In the next chapter, the questions of recovery from both types of depression will be discussed in detail.

CHAPTER VIII

CHARACTERISTICS OF DEPRESSIONS AND RECOVERIES

SECTION 1

CHANGES AND ADJUSTMENTS DURING DEPRESSIONS

It has been observed already that all major depressions are characterized by a rapid decline in sales, prices, and production. We know also that the downswings in business are evidenced by a drastic reduction in outstanding bank credit, as well as by a temporary disappearance of profits in most businesses. All the value relationships existing at the beginning of a depression are upset by it. (The declines in the prices of different classes of commodities are by no means uniform in magnitude; other values—such as rents, interest rates, and wages—do not decline at the same rate as the fall in the general price level.)

(Prices of raw materials and capital equipment goods decline faster and to a greater degree than do the prices of finished consumers' goods.) For a time, after the beginning of a boom depression, there is little or no demand for raw materials. At that time, the manufacturing plants producing capital equipment practically cease to operate, because of a lack of demand for their products. Manufacturers turning out finished consumers' goods greatly curtail their outputs and many of them temporarily cease operations. Those plants which continue to operate usually have on hand sufficient raw materials to supply their current needs. Consequently, they do not enter the markets for new purchases. Enterprises which have raw materials for sale, therefore, must dispose of them at sacrifice prices if they are fortunate enough to dispose of them at all.

(Agricultural commodities consist largely of raw materials. Their seasonal production is an influence which drives the prices of agricultural products lower than the prices of other raw materials during depressions. Such products are normally thrown on the market during the harvesting season in quantities much greater than can be absorbed by industry.) They must, therefore, be held in storage by traders until needed. The holding of commodities in storage is a speculative risk at any time, and one which few desire to assume during periods of falling prices. (At harvest time, therefore, the farmers find few persons who desire to purchase their crops, either for immediate use or for storage.) (As a consequence, the prices of those commodities decline greatly.)

Farming is a business which cannot be shut down as can a manufacturing plant. Stoppage of production means stoppage for a whole year, and the farmer must live during the meanwhile. It has been much more difficult heretofore to get any cooperation as to curtailment of output among the farmers than it has among the manufacturers. The stoppage of the drop in prices of agricultural commodities cannot be "pegged" by the curtailment of output as iron and steel manufacturers stop the decline in the prices of their products.

(Retail prices do not decline as much or as rapidly as do wholesale prices, because the most stable demand of all in periods of depression is the sustained demand for consumers' goods by consumers themselves. Regardless of the business outlook, people must live, and in that process they must buy food, clothing, and other goods to satisfy their current needs. In addition, the current money incomes of consumers as a whole are not immediately reduced so rapidly as prices. Part of the current incomes are derived from past profits, part from rental and interest contracts, and part from wages. The last three income sources are more or less fixed by contracts, which do not change directly with the decline in the price level. Since consumers do not find their money incomes

immediately cut down in proportion to the decline in the general price level, during crises periods, they are frequently able and willing to purchase an increased physical quantity of goods at lower prices. Because of the depression, retailers are unwilling to purchase their former physical quantities of goods. They are unwilling to do this, first, because they desire to liquidate their high-priced stocks and pay off their debts at the banks, and, second, because they expect further

✓ declines in wholesale prices. Speculators, jobbers, and manufacturers also face the necessity of liquidating their stocks. Consequently, they offer larger physical quantities of goods to the reluctant retailers at greatly reduced prices.)
'It is easy to understand why the money incomes from loan and rent contracts are not reduced in proportion to the reduction in the general price level) Most of these contracts do not mature until prices have already been reduced greatly. In the meantime, businessmen are compelled to make payments in accordance with existing contracts, regardless of their reluctance to do so. (Such payments are gradually reduced as new contracts are made, and greatly reduced in
✓ the case of rental contracts for the use of agricultural and business property.)

It is a little more difficult to understand (why wages, salaries, and professional fees do not decline pro rata and concurrently with prices than it is to comprehend why rents and interest charges do not.) But the reason, in part, is the same. While wage, salary, and fee contracts are not formal and for definite periods of time, as in the case of rent and interest contracts, they are, nevertheless, more stable than current buying and selling contracts. (Sales contracts are new for each transaction. Custom (the social habit of looking at certain things in certain ways) decrees that wages, salaries, and professional fees shall remain stable, unless there is a compelling reason for making a change.) A current drop in prices is not at first considered a sufficient justifica-

tion for a proportional reduction in wages. The united resistance of laborers and professional people, at such times, plays no small part in retarding the reduction in their nominal pay. (The only way by which the resistance to wage and fee reductions can be overcome is a general refusal to employ services at the wages and fees demanded.) This condition is part of the reason why many manufacturers close down their plants during periods of liquidation and depression.

The principal statistical measurements of the downward trend of a depression consist of the indices of sales, prices, and production during the depression period. (Surplus stocks of goods, a small volume of sales, a smaller volume of production, low prices, a high cost of production, and little or no profits are the chief characteristics of a period of depression. (The duration and magnitude of such downward movements depend largely upon the following factors: (1) the extent to which prices and values have been inflated through the use of bank credit; (2) the relative amount of surplus goods and surplus productive capacity existing at the beginning of a depression; (3) the difficulties encountered by enterprises in adjusting their production costs to the lower price level; and (4) the occurrence of fortuitous circumstances which cause an increase in the demand for goods.) Let us examine the nature and the influence of each of these factors in a depression.

1. A rapid price rise brought about through an expansion of credit is rank inflation. This situation is accompanied by all the maladjustments of a boom period, which must be readjusted through the liquidation of outstanding credit. The liquidation, however, does not necessarily have to be sufficient in extent to eliminate entirely the credit expansion upon which the inflation fed. The maladjustments may be remedied before that point is reached. Particularly is this statement true when the business world adopts a permanent policy of greater use of credit. Such an occurrence is prob-

able in case of a change in the banking system of the country, which makes bank loans easier to secure.

During a boom period, there is a tendency for maladjustments in the industrial system to increase in a direct ratio to the increase in the use of credit. This tendency is due to the fact that the rapid upward price movement which is largely responsible for the maladjustments is based upon inflated bank credit. The liquidation of credit and the fall in prices, if not disturbed by fresh wars or by new export demands, will tend to be in proportion to the previous credit inflation and price rises. The amount of the surplus supply of goods on hand, however, and the degree to which production costs have been adjusted to the fall in prices, will materially influence the extent and the duration of the depression, regardless of the credit factor.

2. Even though prices rise through the use of credit, deflation will not be in proportion to the expansion of credit, if the boom period has not caused the accumulation of a large surplus of goods available for the markets. Most of the price rises in the United States, from 1915 until the signing of the Armistice in November, 1918, were of this nature. The general price rise was brought about through the expansion of credit, but because all surplus production was drafted for war purposes, there was little or no accumulation of surplus stocks of goods in the hands of business enterprises. The great liquidation anticipated immediately following the war did not materialize, for there were few stores of privately owned finished goods to be placed on the markets. Europe's crying need for reconstruction, and the loans of our government to the European countries, created an export demand which quickly absorbed, at high prices, all the surplus goods we could spare at that time.

When a boom occurs during peacetime, a considerable surplus of capital equipment and raw materials will be accumulated in certain industries, and there will eventually

develop a market surplus of all goods.) When the price break comes, the downward trend will be somewhat in proportion to the amount of surplus goods available for the markets. (When there are large surplus stocks of goods to be absorbed, sales, production, and prices will decline greatly and over an extended period of time.)

(Overinvestment-underconsumption depressions may not be preceded by inflationary booms. They result primarily from a relative overexpansion of industry and the accumulation of large market surpluses of goods. While such depressions may begin at a much slower pace than boom depressions, they are likely to continue over a long period of time and at an increasing rate of speed from day to day. As prices decline, the realization of the existence of the surplus stocks of goods becomes more general. The great magnitude of these surpluses causes the downward movement to continue over a long period of time. As such depressions progress, the volume of sales and production gradually becomes less. The national income shrinks with the decline in the volume of production. Eventually, however, the surplus stocks are used up, and prices and production stop declining.)

3. (Value relationships in our industrial system are not in harmony so long as prices are below the current cost of production. The compensation to labor and to property cannot remain greater than the value of the net product created by them. Under such conditions, the cost of production exceeds the value of the product. This is the situation brought about by liquidation; it must be remedied before the depression is over.)

(Harmony of values is reestablished largely through the reduction of the cost of production. The cost of production is reduced in the following ways: (a) by reduction in the prices of producers' goods; (b) by reduction in wages and increase in the efficiency of laborers; (c) by reduction in inter-

est rates and greater efficiency in the use of capital; and (d) by an increase in the administration efficiency of business enterprises.)

(Since the prices of raw materials and producers' goods decline more rapidly than those of consumers' goods, a large reduction in current cost of production eventually materializes in most industries. This factor, however, does not have an immediate influence in lowering current costs of production. Most enterprises, during the first part of a depression, buy little or no producers' goods. They first use in their current operations the high-priced goods they have on hand. When their stocks of raw materials run low, they buy more at the lower prevailing prices.)

(The closing down of some business enterprises and the curtailment of the output of others throw many laborers out of work during periods of depression. A surplus of labor is thus created, and this surplus brings about a reduction in wage scales through competition for employment. The labor cost of production is thereby reduced, but the process is much slower than the decline in prices. Then, too, the surplus of labor and the scarcity of jobs cause much improvement in the efficiency of laborers. They greatly increase their current productivity as compared with their productivity during boom periods, when labor is usually scarce. The improvement in individual productivity decreases the labor cost, as does the decrease in wages. A lower labor cost of production is thereby brought about.)

(As output is curtailed and stocks of goods are liquidated, business enterprises make fewer demands for new capital funds. Bank reserves increase and loanable funds become plentiful. Interest rates for new loans are then reduced as the old ones mature.) Inflated values of capital equipment represented by shares of capital stock are written off, and much lower interest charges on capitalized values are established. This movement comes about gradually, but inevi-

tably. (The lower capital cost of production plays a large part in reducing the general production cost and in reestablishing a harmony between prices and the total cost of production. Lower payments on rental contracts, which come about at this time, also work toward lower costs of production.) ✓

(The capital cost of production is further reduced by liquidation of the large stocks of goods and by the decrease in the inventory values of goods. The circulating capital of each business enterprise is thus given greater usefulness in production. A larger physical volume of business may be carried on with a much smaller nominal capital, and the capital cost per unit is thus lowered.) ✓

It has been mentioned already that, during periods of business prosperity, business administrators become very lax in the administration of enterprises. They allow all kinds of wastes to creep in, and they also permit administration expenses to increase greatly. Depression and the elimination of profits, on the other hand, cause them to improve their administrative policies, to pay closer attention to the details of administration, and to decrease their administrative expenses in many ways. (These administrative reforms bring about a lowering of the cost of production.) ✓

(As the prices of different classes of goods are forced into a systematic relationship, as harmonies between prices, wages, interest rates, and rents are brought about, and as the cost of production in each industry is adjusted to the price level so that a reasonable profit is possible, the period of depression comes to an end, and there begins a period of business and industrial recovery.) ✓

4. (A depression may be halted by any occurrence which produces a general increase in the demand for goods. Such a terminating factor may take the form of a war, which creates a great demand for large war supplies. A depression may even be converted into a boom by such an occurrence.) ✓

When credit liquidation has been brought about largely by inadequacy of banking facilities, an alteration in the banking policy, in the direction of more liberal credit policies, would have little influence in stopping the decline of prices when a large surplus of goods exists. But if such a surplus does not exist, the depression may be stopped by such a banking policy. The opening of new foreign trade markets may exhaust the surplus of goods and thereby stop liquidation. This development is possible, however, only in the case of extensive foreign loans.)

SECTION 2

RECOVERY FORCES AND PROBLEMS

During a depression, the people consume more than they produce. At that time, consumers spend more than the money earned from current production. The current earned income is supplemented with past savings in making expenditures. Some of the savings spent are personal savings, and some are savings of business enterprises (such as corporate surpluses). The purchasing power of the currently earned national money income is equal to the market value of the current net production of industry. At that time, however, the people spend more than the currently earned money income.)

As production costs are adjusted to the lower price level, and as surplus stocks of goods are absorbed, the volume of production and the current money income are increased. This is the beginning of recovery. Then, the purchasing power of the currently earned national income becomes as large as the current expenditures of consumers, or even larger. When the earned income exceeds the current expenditures of consumers, the nation produces more than it consumes. When this occurs, actual savings are made. Business and industrial recovery are in progress when the pecuniary and

physical volume of net production become as great or greater than the pecuniary and physical volume of goods currently consumed.)

(Business enterprises are in a position to make some profits when their costs of production are reduced below the level of prevailing prices. Then an increase in the volume of production results in substantial business profits. In recoveries, prices usually rise above the lowest point they reached in the preceding depression. The rise in both prices and volume of production causes profits to increase. Growth in business and industrial activity frequently entails some expansion of outstanding bank credit.)

It has been observed already that (during booms or periods of business prosperity, there is an increase in savings and a decrease in the portion of the money income used to purchase consumers' goods and services. But when depressions occur, there is a great decrease in savings, and a corresponding increase in the portion of the income spent for consumers' products. Of course, there is an enormous decrease in the total income at such times. Recoveries bring about a rise in the total money income. There is also an increase in the portion of the income which is saved, and a decrease in the portion of it which is spent.)

(As a result of the liquidation of bank credit during depressions, banks usually possess large reserves at the beginning of recovery periods. Business enterprises which go through depressions are usually in fairly sound financial conditions during the recoveries. They possess small stocks of goods, and they owe very little at the banks. In one way or another, depressions weed out most of the weak enterprises. Most of the weak ones which do not actually fail are reorganized and refinanced. At that time, nearly all the enterprises possess idle capital equipment, as well as idle funds. In general, internal business conditions are favorable for an increase in the volume of production when recoveries start.)

(For reasons inherent in the operation of our industrial system, there are four forces which, during recovery periods, work toward an increased demand for goods and a larger volume of production. These forces are: (1) the replacement of goods currently consumed, and of those used in production; (2) an increase in the stocks of goods on hand; (3) the replacement of worn and obsolete equipment; and (4) the increased purchases by consumers.) Let us examine each of these forces.

1. We have already learned that, in the course of a depression, surplus stocks of goods are consumed or used gradually. Finally, the point is reached, in one enterprise after another, when it becomes necessary to purchase additional goods to replace those currently sold or used. This, we know, is one of the principal factors which brings many depressions to an end. It is also one of the factors which starts recovery movements. A larger volume of production results from the increased sales; prices stop falling and often rise slightly because of a larger volume of business.

2. When there is a slight improvement in the industrial situation, businessmen gain confidence in the future. With a return of confidence, there is a tendency for enterprises to replenish or increase their stocks of goods. Retailers buy more than before; wholesalers and jobbers do likewise. The increased sales of the manufacturers cause them, one after another, to replace and replenish their stocks of raw materials. This movement gradually reaches back into the industries which produce the primary raw materials. The resulting general stimulation in sales from this movement causes a general increase in production, as well as an increase in the national income. In due time, many of the enterprises are enabled to operate at full capacity or very near this point.

3. While depressions last, most enterprises economize in expenditures by spending as little as possible on upkeep,

depreciation, and obsolescence of capital equipment. In short, they permit their equipment to run down. As the recovery improvements enable enterprises to increase their volumes of sales and production, profits proceed to rise. At this point, the enterprises are likely to renovate their capital equipment, and to replace that part of it which is badly worn or obsolete. The expenditures for replenishing capital equipment during recovery periods are very large, and bring about a revival in the industries which manufacture such equipment. Most of these expenditures are met with funds accumulated by the enterprises for this specific purpose, and involve no expansion of bank credit. At the same time, they stimulate a general increase in production and in the national income.

4. The increase in the volume of production, brought about by each of the three factors discussed above, causes a considerable rise in the real national income, as well as in the nominal national income. By far the greater part of this larger national income is spent by the people for consumers' products. This growing demand for consumers' goods greatly stimulates production in the consumers' goods industries. Greater production in those industries causes a rise in the volume of production in practically all other industries. The general increase in the volume of production, in turn, results in further rise in the national income. Again, the larger income and expenditures stimulate production.

(Unless some of the boom-generating forces) discussed in Chapter V(become very active during a recovery period, the upswing does not develop into a boom.) (The natural or inherent recovery forces discussed above are not of a character which generates booms. We know that, in order for booms to develop, the actual purchasing power of consumers must persistently exceed a stabilized value of industry's physical output of consumers' products. This can happen only when both the physical and pecuniary volume of net

production are much in excess of the physical and pecuniary volume of output of consumers' products. When a large part of current production is devoted to the making of new capital goods (both permanent and circulating), the stabilized value of the net product, for a considerable period of time, ✓ is much greater than the stabilized value of the output of consumers' goods. But the inherent recovery forces are incapable of either producing or sustaining such an industrial situation.)

'An increase in the volume of production and in the current national income, for the mere purpose of replacing the goods currently consumed, could not cause consumers' incomes to increase faster than the increase in production of consumers' goods. When goods are not produced so rapidly as they are consumed (used up), the people live partly out of past savings. They spend more than they produce. The replacement of goods currently consumed could have no influence whatever in creating boom conditions, although the process is a powerful force in stopping depressions and starting recoveries.

During recoveries, an increase in the stocks of raw materials and other capital goods by business enterprises causes sales, production, and money income to rise. The rise in the national income results in greater sales of consumers' goods. Should such purchases of capital goods assume great magnitude, and continue for an appreciable period of time, a market shortage of consumers' goods would develop. This would be true because the necessary increase in production and in income would bring about such a rise in consumers' purchasing power that the consumers' goods industries would be unable to supply consumers' demands. The production of such goods, of course, would increase. If the consumers' goods industries, then, reached full capacity of operation, and there were still a market shortage of such goods, a business and industrial boom would be inaugurated.)

The purchase of producers' goods by enterprises during recovery periods, for the purpose of replenishing depleted stocks, however, could never reach the magnitude necessary to generate a boom. As a matter of fact, business managers are quite conservative in replenishing their stocks of goods while recoveries are in progress. Few of them purchase more raw materials or other producers' goods than they need for their current production requirements. Too many of them have recently gone through experiences of taking heavy losses on excess stocks of goods to permit them to overstock again so soon after business improves. Very little additional bank credit is required to permit enterprises to replenish their circulating capital stocks. Many of them use only their own cash funds for that purpose. The process of increasing such stocks is gradual and of comparatively small magnitude. Much of it is accomplished through current savings from profits, and involves neither the use of new bank credit nor a sudden increase in the demand for goods. Certainly, such an increase in the demand for producers' goods could not be strong enough to stimulate production to the point at which consumers' incomes would be large enough to create a market shortage of consumers' goods.

In some recovery periods, the replacement of worn and obsolete capital equipment is of greater magnitude than in others. But in no recovery period is the purchase of new equipment by enterprises out of line with the general increase in the volume of production. At such times, enterprises purchase only the equipment they need for immediate use. While such purchases greatly stimulate the equipment industries and bring about a general increase in the volume of production and the size of the income, they cannot possibly assume proportions large enough to cause a market shortage of consumers' products. Little or no new bank credit is used by enterprises in making purchases to replenish their equipment. The new equipment is usually paid for out of

the depreciation and obsolescence funds accumulated for that purpose.

Except for installment purchases, the purchasing power of consumers is limited by their current incomes. Consumers' current incomes cannot exceed the value of the current net production of industry, except during depressions, when business enterprises are sustaining losses. Consumers' expenditures are less than the national income (net product value) by the amount of current savings. When the operations of the industrial system are directed primarily toward supplying the market demand for consumers' goods, the market demand for such goods cannot exceed their current output or market supply. This is true because, under such conditions, the value of the current output of consumers' products is almost as large as the value of the current net production of industry. Consumers' purchasing power cannot exceed the flow of consumers' products into the markets. Under such conditions, the volume of production, consumers' incomes, and the flow of consumers' goods increase at about the same rate.

Certainly, if none of the boom-generating forces interfered with the natural recovery forces, the immediate productive activities of the industrial system during recoveries would be directed primarily toward the ripening of finished consumers' products. Provided the national income were saved and spent at a ratio that would maintain a balance between the productive and the consumptive capacity of society, the natural recovery forces would bring about full operation of industry under a balanced or stabilized condition of operation. As a result, the volume of production would continue to increase, and consumers' real incomes and the production of consumers' products would increase at exactly the same rate. In short, consumers' market demand (purchasing power) derived from the value of the goods to be purchased and consumed is a stabilizing force in industry.

During recovery periods, consumers' purchasing power tends to be derived almost entirely from the production of consumers' products.

Cumulative rising prices can be initiated by a sufficient increase in consumers' money incomes. But when consumers' incomes are derived almost entirely from the production of consumers' goods, the market demand for such products cannot be large enough to start a boom movement. Under such conditions, the market supply of consumers' goods increases as rapidly as the purchasing power of consumers.

The question of whether boom-generating forces are likely to be brought into play during recovery periods, or immediately thereafter, will be discussed in the next section of this chapter.

SECTION 3

RELATIONS OF RECOVERIES TO SUCCEEDING TRENDS

We have learned that unless depressions are stopped by such extraneous influences as wars, depression forces must run their respective courses before the natural recovery forces are brought into play. In the preceding section it was discovered also that the natural recovery forces tend toward the establishment of an industrial and business balance in our economic system. It was there pointed out that the natural recovery forces are not boom generating in their operations. The tentative conclusions from these facts are that the recovery period is the last period of every business cycle, and that this last cyclical phase does not generate the first phase (boom or business prosperity period) of the succeeding cycle. These conclusions appear to be true when applied to the recovery period of either the boom cycle or the over-investment-underconsumption cycle.

In our national history, however, booms have usually followed recovery periods chronologically. But booms which

follow recoveries chronologically do not always immediately succeed the recovery periods. Occasionally, recoveries have continued their upward movements into booms, but many of them have not progressed directly into boom conditions. Often, when booms have followed recoveries, there has been a lapse of a considerable period of time (years) between the completion of the recovery movements and the initiation of the succeeding booms. Some recoveries have been followed by new depressions, instead of by booms. Others have been succeeded by periods of a comparative stability of business and industry. Still others have been followed by periods of business prosperity which, in turn, have been succeeded by depressions. The determination of the kind of business trend which will follow a recovery period will depend upon the operation of the forces which upset the balances in our industrial system.

Toward the end of past recovery periods in our history, business conditions have frequently been favorable for bringing boom-generating forces into play. While America's founders were settling the country, exploiting its natural resources, and developing its industries, recovery conditions created financial, industrial, and business conditions propitious for further settlement and industrial expansion. Until the beginning of the twentieth century, most of the boom-generating forces were constantly available, ready to be brought into play whenever financial and industrial conditions were made favorable. These conditions were often most favorable during recovery periods or at their close.

As previously pointed out, the rapid settlement and industrial development of the country prior to 1890 was retarded principally by a persistent shortage of new investment funds. Recovery periods were usually attended by favorable banking conditions and comparatively large bank reserves. Recoveries also brought about favorable profit margins in business, and thereby created conditions inviting business-

men to utilize or to place in operation the various boom-generating forces. In short, recoveries not only brought about an increase in the supply of loanable funds, but, at the same time, increased the prospective profit margins that might be received from bringing boom-generating forces into operation. The peacetime boom-generating forces, it will be remembered, are: (1) the settlement of new territories, (2) the exploitation of unexploited natural resources, (3) the development of new industries, and (4) the change in methods of production or in the character of the products in established industries.

So long as the new development opportunities offered by the above-enumerated factors existed in great abundance in this country, these opportunities were taken advantage of extensively and intensively whenever financial and business conditions permitted venturesome individuals to do so. For many reasons, these individuals could not do this during depression periods. At the beginning of recovery periods, also, conditions have been less favorable for such ventures than they have after the recovery movements were well developed. Consequently, in the past, booms have frequently been generated by the time recovery movements were completed, or even before. Because of this fact, many students of business cycles have erroneously concluded that the natural or innate recovery forces themselves generate booms. This error on their part would be of little practical significance, first, if it were not for the fact that not all recoveries continue their upward swings into boom movements, and, second, if it were not for the strong probability that recoveries, in the future, will be followed immediately by booms much less frequently than in the past.

As a country attains more complete maturity in its economic and industrial development, the boom-generating forces tend to become constantly weaker and less alluring to venturesome promoters and developers. The profit oppor-

tunities offered by these combined factors decrease with the increase in the economic development of the country. When all the suitable areas of this country had been settled, this boom-generating force ceased to operate. As the mineral resources of the country were more completely discovered and privately appropriated, the exploitation of these resources became a weaker boom-generating force. And the more nearly the country reaches completion of development of its primary and essential industries, fewer will be the new industries, over a given period of time, which offer large prospective profits to the developers.

Of course, changes in the methods of production (improved machinery and equipment) and improvements in the quality of products will continue to offer the developers new opportunities for good profits. But it is likely that the large business enterprises of today will take advantage of these technological improvements more constantly in the future than have the smaller enterprises in the past. Funds for enabling enterprises to adopt these technological improvements, also, are likely to come more from corporate funds accumulated by the enterprises for this purpose (depreciation and obsolescence funds) and less from new investments derived from personal savings and new bank credit. In other words, opportunities for making large profits by the organization of new enterprises, with the most modern equipment and methods of production, are not likely to be very great in the future. This prediction is sound because the large, well-established enterprises with plenty of cash funds will acquire the most modern equipment and the best improved processes almost as quickly as they are made available. It is probable that little new bank credit will be needed in the future to enable enterprises to take advantage of all the technological improvements in methods of production which are invented or discovered. Patent restrictions on inventions, in the future, will probably be a greater restraining

influence on the wide adoption of technological improvements in methods of production than will the shortage of investment funds for the purchase of new capital equipment.

In the future, therefore, recoveries are less likely to be succeeded immediately by booms than in the past. Because of the decline in the generating power of boom forces, furthermore, recovery movements themselves will probably be slower in the future, and cover a longer period of time than in the past. In many past cases, the natural recovery forces have been aided or supplemented in their results by boom-generating forces. Removal of the activity of boom forces from the recovery situations will throw the entire burden of bringing about recoveries upon the natural recovery forces. Under such circumstances, there cannot be very rapid recovery movements, and unless wars or foreign trade forces produce booms, the latter cannot immediately follow recoveries.

Another factor which will greatly retard recovery movements in the future is the growing inequality in the distribution of the national income, or the relative increase in the portion of the national income saved and invested. During business prosperity periods, this relative oversaving causes much excess capacity of production and the accumulation of large surplus stocks of goods. Both the surplus productive capacity and the surplus goods prolong depressions, as well as retard the succeeding recoveries. Recoveries from future depressions probably will be slow because there will be less increase in production for the purpose of replenishing stocks of goods and worn capital equipment, as compared with such happenings in recoveries from boom depressions in the past.

The movement toward oversaving and underconsuming the proceeds of production (the real income), therefore, will greatly influence the nature of the trend of business which will follow recoveries in the future. A recovery from a

depression caused by overinvestment and underconsumption certainly could not be followed by a peacetime boom. Without governmental interference, such a recovery would consist primarily of the reestablishment of a business and industrial balance under conditions of a comparatively low volume of industrial production and money income. In Chapter IX, more extensive consideration will be given the reasons why a natural recovery from an underconsumption depression is likely to have a low volume of production.

Provided that boom-generating forces are not brought into play in such a manner as to cause extensive use of bank credit, and that the current money income is invested and spent at the correct ratio, a recovery period should be followed by a balanced business and industrial condition. Under such a condition, the general price level would be comparatively stable, and the purchasing power of the current national income would increase at exactly the same rate as the increase in the physical volume of net production. There would be just enough of the current income saved and productively invested to permit the industrial system to increase its productive capacity at exactly the same rate as the increase in the real purchasing power of consumers. The industrial system, of course, would be adjusted in its operation to turn out new capital goods and finished consumers' products at exactly the same ratio as that at which the current income would be saved and spent.

Under such a balanced business and industrial situation, both the physical volume of production and the national income would increase steadily, and the economic balance would not be upset by the larger volume of industrial activity. Consumption, then, would increase at least as rapidly as the total volume of net production. There would be little or no use of new credit purchasing power, either by producers or by consumers. All finished goods and services would be purchased with current incomes derived from current pro-

duction. General overproduction or a shortage of consumers' purchasing power, then, would be impossible. Under such circumstances, Say's *law of the markets* would operate perfectly.

The practical problems involved in the attainment of a workable balance in the operation of our industrial system will be considered in the next chapter. If we are unable to solve these problems satisfactorily, we shall find it impossible to attain industrial and business stabilization in the operation of our industrial system.

CHAPTER IX

UPSETTING FORCES AND BUSINESS STABILIZATION

SECTION 1

CHANGES IN BOOM-GENERATING FORCES AND FACTORS

It will be recalled that peacetime booms are usually generated by business enterprises' using an excessive amount of bank credit to expand their operations in order to take advantage of newly created profit opportunities. These new profit opportunities have been brought about mainly by the following industrial development forces: (1) the settlement and development of new territories; (2) the exploitation of rich natural resources recently made available; (3) the establishment of new industries; and (4) expansion and change in existing industries. In the past, bank credit has been used extensively to finance industrial development induced by the above-enumerated factors. There are three reasons for such extensive use of bank credit, as follows: first, the great magnitude of profit opportunities afforded by the development factors; second, the relative shortage of investment funds from current savings; and third, the character of our banking system.

In a previous chapter, mention was made of the growing maturity of our industrial system. Each of the peacetime boom-generating forces became weaker with the more complete economic development of the country. When all the desirable areas of the country had been settled, there were no more frontier territories for people to move into and develop. The large profit opportunities offered by such movements disappeared with the frontier. As the most valuable mineral deposits were located, appropriated, and

exploited, the large prospective profits offered by such activities dwindled. When railways were built in every settled community, and in many of the out-of-the-way places as well, the building of new railways was no longer a very inviting undertaking. Opportunities to make large profits were then confined largely to further industrial development of the settled communities.

From the beginning of our national existence almost until the present time, the establishment of new industries has offered promoters and developers vast opportunities of making large profits. Many of the great personal fortunes of today were founded by those who established and developed successful new industries. As our industrial system grew into maturity, however, the opportunities of making big profits by establishing new industries gradually decreased. While such opportunities have not disappeared entirely, and probably will never do so, they are not so numerous now as formerly. Most new industries of today grow out of technical discoveries or inventions in connection with established industries. They are secondary rather than primary in their nature. For this reason, the establishment of new industries in the future is not likely to generate a rapid industrial expansion movement in this country.

The possibilities are that most established industries will expand in the future as rapidly as they have expanded in the past. Certainly this will be the case if we are able to attain a balance in the operation of our industrial system. Future expansion of our established industries, however, is likely to be largely through an increase in the size of the enterprises rather than through an increase in the number of operating industries. In short, it is probable that fewer new business enterprises will be launched in the future than have been started in the past.

Technological improvements in machinery, processes, and character of products in established industries will probably

be more numerous in the future than in the recent past. The probabilities are strong that most established industries will undergo veritable revolutions in their methods of production during the next quarter of a century as well as in the character of their physical capital equipment. But it is not expected that these great technological changes in established industries will create large prospective profits for new capital investments in new enterprises. These industrial changes are likely to be sufficiently gradual to permit the operating enterprises to adopt them through the use of their own depreciation and obsolescence funds plus the use of their accumulated surpluses. Most of the technological changes will be made without involving the investment of any new capital funds. Certainly, the new capital investments required by these changes will at no time exceed the amount of current savings of the nation.

Thus the industrial development forces which, in the past, produced prospects for large profits have grown weaker as national industrial development was progressing toward maturity. While these boom-generating forces have decreased in their relative magnitude, the supply of loanable funds from savings has increased relatively in its magnitude. The steady growth in accumulated capital, the increasing inequality in personal incomes, and the rising profit margins have resulted in a rapid growth in savings from the current national money income. Since 1900, there has been a much larger portion of the national income saved and reinvested than ever before. From 1921 to 1929, in fact, the nation was faced with an actual surplus of investment funds from savings.

Indications are that, in the future, current savings of individuals and business enterprises will be more than sufficient to furnish all the capital funds required to take advantage of the prospective profits created by industrial development forces. (In other words, another great expansion of bank

credit for the purpose of securing the funds necessary for an industrial expansion movement is altogether unlikely. This statement holds true for two reasons: first, industrial expansion movements in the future are not likely to be so intense as those of the past; and, second, savings from the current money income are now large enough to supply all the funds that may be needed for such purposes. Peacetime inflationary booms, therefore, are not likely to occur in the future, because of the operation of industrial development forces.

Until the establishment of the Federal Reserve Banking System just before we entered the World War, there was no central control over the loaning activities of banks. They expanded bank credit whenever there was a demand for it, provided their reserves would permit its expansion. The question of government regulations of the expansion and contraction of bank credit will be discussed in Chapter X. All that need be said here is that the lack of any effective public control over the expansion of bank credit during boom periods of the past has been one of the principal causes for the intensity of those booms. Any of those booms might have been halted by the stoppage of credit expansion.

Notwithstanding the above conclusions in reference to industrial booms, it is still possible for the country to have inflationary booms in peace times. Such booms might be created artificially by governmental monetary and fiscal policies. The gold devaluation of the dollar in 1933 caused an artificial rise of about 20 per cent in the general price level, and resulted in much speculative purchase of commodities. Such a policy, carried to greater lengths than it was in 1933-1934, would produce a temporary inflationary boom. Certainly, the issuance of large quantities of paper currency (treasury notes) by the government would cause an artificial rise in prices and induce speculative activities characteristic of booms. Such booms could be kept going only by repeated issues of larger quantities of government

paper money; they would inevitably end in crashes and be succeeded by disastrous depressions.

An inflational boom produced by a governmental monetary or currency policy differs in many respects from a bank credit inflational boom. Much more speculation and much less industrial production occur in the former type of boom than in the latter. A crash following a monetary or currency boom is more precipitous and more disastrous than a crash following a bank credit inflational boom. It is an unwise government indeed which brings about an inflational boom by debasing the monetary standard or by issuing paper money.

Unbalanced budgets and large government loans usually produce inflational credit and price conditions. In such cases, only a small part of the borrowings of the government are supplied from actual past or current savings of the people. Ordinarily, large fiscal deficits are met, in part, by the government's borrowing from banks (or selling them new government securities). The government thus uses bank credit to secure a large part of the funds it spends. This expanded bank credit is paid out by the government and used to purchase goods in the markets. The demand for goods then exceeds the purchasing power of the money income paid out by industry, and there prevails the same situation that occurs in all bank credit inflational booms. An artificial demand for goods is thus created, and prices rise as a result.

Budgetary deficits usually result from extraordinary expenditures by the government. Such extraordinary expenditures, of course, always occur during wars. They may occur during peace times because of expenditures for the support of the unemployed, because of pension or bonus payments to ex-soldiers, or because of financial aid to business. Regardless of the causes of extraordinary expenditures by the government, when financed with bank funds they invariably bring about inflational conditions of bank

credit. The only way to avoid inflation of bank credit or currency as a result of a budgetary deficit is to finance this deficit with past or current savings of the people. Use either of bank credit or of currency will result in price inflation to the extent to which either bank funds or new currency issues are used to meet the deficits. Large deficits financed by either method will tend to produce inflationary booms. Such booms will end inevitably in crashes; the magnitude of the crashes will depend largely upon the magnitude of the booms.

The only sure way to avoid inflationary booms resulting from budgetary deficits is to avoid the occurrence of such deficits. Countries that have entered major wars have found it impossible to avoid the creation of large budgetary deficits. They have found it impossible to raise sufficient revenues to meet the wartime demand for large immediate expenditures. The same argument might be advanced with reference to meeting public expenditures for the support of a large army of unemployed workers and their families during a modern business depression. Public expenditures resulting from both war and unemployment might be avoided, of course, by keeping at peace with other nations and by operating our industrial system so as to avoid depressions. Unless we succeed in doing both, we must, in some manner, meet the financial problems which arise from our failure.

How to meet the unemployment problem now arising from the imperfect operation of our industrial and business system will be discussed in Chapter X. If we enter any foreign war in the future, we should pay, from current revenue, as large a share of the cost of the war as possible. This could be done only by the drastic increase of tax rates immediately upon the declaration of war. Part of the war revenue system should be a confiscatory war profits tax. As far as possible, the resulting budgetary deficit should be financed from the past and current savings of the people.

Even when the government follows the best fiscal policy in financing a war, a considerable amount of bank credit inflation is likely to result. The war demand for goods causes business enterprises to use bank credit in order to take advantage of such a demand for goods.

Theoretically, the general price level should be "frozen" or stabilized during a war, but it is doubtful if such a policy could be enforced with a great degree of success at such a time. During the World War, there was much talk about how the Federal Government "pegged" prices and kept them from rising as much as they otherwise would have risen. There is considerable doubt in the minds of many as to the effectiveness of the government's price-pegging policy at that time. It is believed, nevertheless, that the government should use its power to retard the rise in prices as much as possible during war times.

SECTION 2

CHANGES IN INCOME DISTRIBUTION FORCES

It has been pointed out that the growing inequality in the personal distribution of the national income in this country produced a situation of relative oversaving and underconsumption. The consequence of this situation was the disastrous depression in 1929. The development of great inequality in the distribution of the national income was the result of two basic causes, as follows: first, the concentration of control and ownership of a large part of the productive wealth in the hands of a very small percentage of the population; and, second, a relative increase in the share of the national income which goes to profits and property payments, and a relative decrease in the share of it which goes to wages and other personal service payments.

Because of the operation of these two factors, a very large portion of the current national income is received by a very small percentage of the population. The incomes of these

few very rich people are so large that the recipients are able to spend only a small portion of them to satisfy their daily wants, and are compelled, therefore, to save and reinvest the bulk of them for further production. The mass of the income receivers, on the other hand, do not receive incomes large enough to enable them to buy the consumers' commodities produced, or to permit them to satisfy their daily desires for such goods. The result is a relative excess capacity of production, an oversupply of investment funds, and a shortage of consumers' purchasing power, as well as a market oversupply of goods. What are the natural trends of the factors and forces which produced this situation?

The great concentration of ownership and control of a very large share of the productive capital of the country in the hands of a very few people is due in part to the great inequality of personal characteristics of different individuals, and in a larger measure to special advantages acquired by those who now possess most of the property. There is little or no evidence that people are becoming more equal in their economic capacities or abilities. The special economic advantages of the rich, moreover, apparently have been constantly increasing instead of decreasing. Possession or inheritance of great wealth gives the rich great economic advantages over those who have little wealth. Under a *laissez faire* policy, the rich become richer because wealth begets wealth. The advantages acquired by the few in the control of our large corporations have tended to increase rather than to decrease. One is forced to the conclusion that the so-called natural economic and social forces are not now operating to bring about a more equal ownership of productive wealth in this country.

Great inequality in ownership and control of productive wealth would not upset our economic balance unless such concentration resulted in great inequality in personal incomes or was attended by it. Since productive wealth

gives rise to interest, rents, and profits, its ownership by a few is the chief cause of the present inequality in personal incomes. The relative increase in the share of the national income which is distributed as profits and property payments, and the relative decrease in the share of it which is distributed as payments for labor and personal services, are the reasons why great inequalities in the ownership of productive wealth cause an increasing inequality in personal incomes. Let us briefly examine the operation of the economic forces which determine the division of the national income into profits, interest, rents, and wages.

According to traditional economic theory, the rate of profits tends to decrease in each industry as that industry becomes more completely developed. This theory of profits holds that competition in each industry reduces prices to a level equal to the cost of production of the marginal producer. The lowering of the cost of production by efficient enterprises drives the marginal (high-cost) ones out of business. Then methods of production and administration in each industry are gradually standardized, and costs of production in the competitive enterprises are equalized. Cost equalization, the theory holds, reduces competitive profits to the level of "wages of management." This is the competitive theory of profits, which is supposed to apply to nearly all industries.

Contrary to this theory, however, the rate of profits in the major industries in this country has tended to increase rather than to decrease as they have developed more completely. During the twenties, most manufacturing industries earned the highest profits they have ever earned. There are two main factors which explain why the profits of our large business enterprises have increased rather than decreased: first, growing monopolistic control over prices; and, second, widespread operation of cost-reducing forces in production.

Through holding companies, mergers, community-of-interest combinations, and trade associations, the leaders in the large enterprises in practically all major industries have either eliminated or greatly lessened price competition. The prevailing prices of products in those industries are far more monopolistic than competitive. The attempts of these leaders in big industries to eliminate price competition or "price cutting" and to establish "fair prices" have been effective in numerous cases. Consequently, the cost of production in the marginal enterprises has little influence upon the prices received for the products of the monopolistic industries. Nor have prices of products been reduced in proportion to the lowering of the cost of production in these industries. The result is that profits have increased with the development and organization of the principal industries.

Since 1900 there have been more revolutionary improvements in the productive processes of most industries than occurred in all our industrial history previous to that date. In most factories, powerized automatic machinery has been extensively substituted for human labor. Discoveries in physics and chemistry have been used widely to improve productive processes, as well as quality of products. Practically all these technological improvements in productive processes have been cost reducing in their nature. Because of the lower costs of production, the prices of products in the industries affected should have been reduced proportionally. Under the competitive-price theory, they would have been so reduced in the course of time. But the prevalence of effective monopolistic control over prices in many of our industries has kept the prices of products in those industries from being reduced in proportion to the lower costs of production. In the well-organized industries, exceptionally high profits have resulted.

In the division of the net product value of enterprises between labor and property factors, the latter have gained

much advantage over the former. Not only have managers of large business enterprises been able to control prices in the interest of higher prices, but they have also been able to hold down wage rates in the interest of higher profits and property incomes. Natural economic developments plus effective organization of large employers have kept real wages from increasing in proportion to the increase in physical production per laborer. Widespread use of automatic machinery has displaced laborers in industry to such an extent as to create a surplus supply of labor. The disappearance of the frontier has kept the surplus laborers from being absorbed by this exhausted outlet. Laborers have thus become forced to bid against one another for a limited number of jobs in industry. This competition among laborers has kept wages from rising in proportion to the increase in production per laborer.

The constant growth in the size of employing business enterprises and the increasingly impersonal relations between employers and employees have weakened the bargaining power of laborers in dealing with employers. It became necessary long ago for the laborer to pit his bargaining power against that of the large corporation which employs hundreds or thousands of employees. The small percentage of laborers who organized labor unions to deal jointly with large employers somewhat strengthened their bargaining power. Immediately, the employing corporations countered the labor-union movement by organizing large employers' associations to deal jointly with the laborers. About 90 per cent of the laborers in this country do not belong to independent labor unions. They must bargain with employers single-handed. To the large employer, it makes little difference whether a particular laborer is employed, but to the individual laborer it usually makes a great deal of difference whether or not he gets a particular job.

Space will not permit a detailed discussion of various wage theories. Suffice it to say that the relative bargaining power of employers and employees is the principal factor which determines the share of the net product value of industry that goes to laborers as wages. The relative bargaining power of these forces is based largely upon two considerations: first, the relationship between the number of laborers and the number of available jobs; and, second, the relative degree of united action with reference to employment among employers on the one hand and among laborers on the other. In so far as the illusive "marginal productivity" of laborers is determinable, it does nothing more than measure the maximum wages that an employer might pay. Relative bargaining power might be such as to permit employers to secure laborers at wages much below their marginal productivity in industry. In the face of a surplus of laborers the level of wages determines the standard of living of laborers, instead of vice versa. It was the growing weakness of their bargaining power during the twenties that accounts for the failure of laborers to receive an increase in real wages in proportion to the rise in production per laborer.¹

During the past few decades, nominal capital investments in enterprises have grown more rapidly than the volume of net production. If it is assumed that a fixed rate of interest is paid upon the nominal capital of all enterprises, an increasing share of the national income is therefore paid out as interest upon capital. An analysis of income tax returns establishes the fact that recently total interest payments have absorbed an increasing portion of the national income. An examination of prevailing interest rates from 1900 to 1929 also indicates that there has been no downward secular trend in those rates. We know, however, that there has been a growing surplus of new investment funds during the

¹ A. B. Adams, *National Economic Security*, pp. 41-43.

twenties. Why, then, did not interest rates decline during that time?

According to classical economic theory, interest rates are determined by the marginal productivity of new capital. A relative increase in the supply of investment funds, according to this theory, causes a decline in the marginal productivity of capital. As a consequence, interest rates decline. The principal reason why interest rates did not decline as a result of the relative increase in new investment funds is the high profit margins prevailing during that time. There is an intimate connection between interest rates and profit rates. If profit rates are high, interest rates tend to be high, and vice versa. When profit rates are kept high by monopolistic control in industry, interest rates tend to remain high in sympathy with the high profits. The speculative mania aroused by the high profits is the principal reason for the high prevailing interest rates. The fall in interest rates from 1931 to 1936 has been due in part to the decline in production and in profits, and in part to the fiscal and banking policies of the government. These governmental policies will be discussed in Chapter X.

As time has gone on, urban rental and royalty payments on land and natural resources have absorbed a larger percentage of the national income. From 1920 to 1933 agricultural rental payments were declining rather than rising. It was inevitable that with the private appropriation of land and natural resources, increased demand for their uses would cause a rise in rental and royalty payments. If our total land area were more limited, agricultural rentals would rise with the growth in our population. The point to be noted here is that the larger rental and royalty payments are absorbing an increasing portion of our national income, and that a large portion of these payments is going to a few people, who have very large incomes.

A less unequal division of the national income would result if a smaller portion of it went to profits, interest, and royalty payments, and a larger portion of it were paid as wages and salaries. This is true because the large majority of income receivers depend upon wages and salaries for all or nearly all their incomes, while the very-large-income receivers depend upon profits and property payments for the major portion of their incomes. The above discussion indicates, however, that the operations of the natural economic forces are tending toward higher profits and property payments, and toward relatively lower wage payments. If this is true, the nation cannot depend upon the natural economic tendencies to bring about a more equal distribution of the national income. Unless we do secure a better distribution of income, we shall be faced with the perpetual problem of overinvestment-underconsumption in the operation of our industrial system. Under such conditions, we shall not be able to operate industry at a point anywhere near its full capacity.

The adjustments necessary to establish an industrial balance were stated by the author in *National Economic Security*, as follows:

To place our industrial system in a condition of balance or equilibrium it would be necessary to readjust both the flow of the national money income and the *relative* productivity of the different industries. It would be necessary to place a larger percentage of the national income in the hands of the mass of consumers, and a smaller percentage of it in the hands of investors than was done during the predepression days. We must have *relatively* less saving on the part of the few, and *relatively* more spending on the part of the masses. With such a change in the flow of the national money income there would be less new construction and expansion of industries in proportion to total production than we had in the twenties. Therefore, there would be relatively less demand for constructional materials and for commodities of the heavy goods

industries than before the depression. On the other hand, there would be relatively more demand for consumption goods than during the twenties. In other words, the establishment of an industrial equilibrium would boost the consumption goods industries and cause them to expand, but it would not revive immediately the capital goods industries. Should we secure an industrial equilibrium, it would be a long time before the demand for new constructional and capital goods would equal that of 1927.¹

SECTION 3

PRIVATE EFFORTS TO STABILIZE BUSINESS

A decade or more ago, several students of business fluctuation problems expressed the belief that, through the education of businessmen, business cycles could be eliminated. They thought that as businessmen gained more complete knowledge of the various economic relationships involved in the different phases of fluctuation movements, they would be able to adjust their business policies in such manner as to avoid serious ups and downs in their own enterprises, as well as in business in general. These students emphasized the importance of gathering accurate statistics in reference to all phases of our industrial and business activities. They claimed that with such information it would be easy for businessmen, from time to time, to make the necessary adjustments in their business policies to avoid serious industrial fluctuations.

Certainly, if we are to eliminate cyclical fluctuations either by private or by public policies, we must acquire accurate knowledge of the economic interrelationships involved in the various phases of those fluctuations, and we must have reliable statistical data which measure the various fluctuating relationships. As indicated in Chapter IV, much of the statistical information now gathered in reference to the different aspects of our industrial and business history is

¹ *National Economic Security*, p. 199.

both incomplete and untrustworthy. There now exists practically no reliable current statistical data on certain important aspects of our industrial history. This is particularly true of current profits and wages. The problem of inadequacy of statistical data relative to certain aspects of business fluctuations will be pointed out again in Chapter XII, which deals with business forecasting. The Federal Government, however, is constantly improving the statistical information it now publishes on current business, and the operation of the National Social Security Act and other recent legislation will likely result in the compilation of many valuable new statistical data.

It would be in the interest of sound business, as well as an aid to a more stabilized operation of our industrial system, for every businessman to avoid highly speculative ventures, and to keep his business in a sound and conservative condition at all times. Both periods of business prosperity and periods of depression would have been of much less intensity in the past if, at all times, a greater number of business managers had avoided following bad business practices. Overexpansion of capital equipment, excessive stocks of raw materials and finished goods, extension of too much credit to customers, excessive borrowing from banks, and inflation of capital values are some of the practices which should be avoided. Every business enterprise should have an efficient budget and a planning department which makes its plans of operations on the basis of a thorough knowledge of conditions in the industry and in business in general. If all enterprises were so operated, there would be fewer violent fluctuations in the operation of our industrial system. It is still doubtful, however, that the possession of greater knowledge and information concerning general business conditions would enable the average businessman to reduce materially the intensity of fluctuations in the trend of business.

There are grounds for serious doubts that individual businessmen would act in such ways as to eliminate or greatly reduce business fluctuations even if they possessed complete and accurate knowledge and information concerning current phases of cyclical fluctuations. There is a strong tendency for individual businessmen to use their knowledge of business conditions as an aid to help them play the speculative game safely. Most of them attempt to take full advantage of a boom or a period of business prosperity by making large immediate profits with the hope that they will be able to deflate their own businesses before good times end. Such use of a knowledge of business conditions tends to exaggerate rather than to minimize cyclical fluctuations. In short, the temptation to yield to the opportunity of making large immediate profits tends to prevent the individual businessman from using [his] knowledge of the trend of business in such ways as to stabilize his own business.

Both the large-scale production and the industrial combination movements possess stabilizing and unstabilizing forces. Monopolistic combinations of the vertical type tend to lessen the overstocking of raw materials, to prevent excessive credit expansion, and to curtail the accumulation of large stocks of finished goods in the industries where they dominate. Development of excessive productive capacity during good times is not so likely to occur in monopolized industries as in competitive ones. Drastic mechanical changes, furthermore, are likely to be made more slowly in monopolistic industries than in industries where competition is strong. Because of ability to protect the profit margin when business declines, however, fluctuations in the volume of production are much greater in monopolized industries than in competitive ones. On the other hand, more stable prices are maintained under monopolistic than under competitive conditions.

It might be argued that, if all industries were monopolized, there would be fewer fluctuations in the general trend of business than under a highly competitive industrial system. Doubtless this would be the case if it were not for the fact that there is more unequal distribution of the proceeds of production in monopolized industries than in competitive ones. In comparison with competitive industries, prices and profits are high and wages are low in monopolistic industries. For these reasons, the monopolization of a greater number of industries would bring about underconsumption depressions more quickly than they would occur under competitive conditions.

Many of the leaders of big business have expressed the belief that, if the Federal Government would abolish all antitrust laws and permit enterprises in each industry to enter into whatever trade agreements they desired, the operation of our industrial system would be stabilized, and the nation would make great industrial progress. They claim that, by giving our industrial enterprises such freedom, the business leaders would develop a plan of self-regulation of industry which would eliminate business depressions and result in the full and continuous operation of industry. In many essential respects, the National Industrial Recovery Act (now deceased by grace of the Supreme Court) provided such a scheme of self-regulation by the business leaders. The only difference between the NRA and their original proposal of self-regulation was that the NRA forced upon them certain labor provisions in return for the privilege of privately agreeing upon codes to regulate prices, output, and trade practices.

Our purposes do not require a detailed discussion of the character and the results of the application of the hundreds of so-called permanent codes of fair competition that were put into operation under the NRA. Suffice it to say that practically all the codes permitted the enterprises, in the

industries to which they applied, to agree upon prices and volume of output, and to enforce those agreements. In spite of the labor provisions inserted in those codes by the law, application of the codes resulted in a general decrease in production, a rise in prices, an increase in profits, and a smaller share of net production to laborers. Continuance of such a self-governing, monopolistic plan of industry would have resulted in the stifling of industrial progress. It would have meant the preservation of a low volume of production, the existence of a large army of unemployed, the necessity of a low standard of living for the masses, and the accumulation of large profits for the big industrial enterprises. Business might have been stabilized through such a scheme, but stabilized and stifled on a low level of productivity and a high level of profits. Such a stabilization would be even less desirable than the industrial fluctuations of the past.

There are two fundamental objections to any self-regulating plan of industry: first, it would be designed to raise profits at the expense of the public and of laborers; and, second, it would limit production and perpetuate inefficient enterprises. No such plan could ever bring about wide enough distribution of the national income to enable us to operate our industrial system at full capacity for any appreciable period of time. While the plan might prevent over-production of goods, at the same time, it would make impossible a large volume of consumption. This is true because it would impose definite and serious limitations upon the real incomes of the masses of consumers.

As already indicated, the natural boom-generating forces are declining in their boom-producing power. Even without the aid of a self-regulating plan by business leaders, it is not probable that these natural development forces will produce inflationary booms in the future. If such booms occur again, the probabilities are that they will be generated

by war conditions or by faulty fiscal and currency policies of the government. No self-regulating industrial plan could be used effectively to nullify the inflational consequences of war financing by governments, or of large governmental borrowings, or of the issuance of large quantities of paper currency. In other words, the probabilities are that if we are to have inflational booms in the future, they will not be generated and propelled by the natural development forces creating new opportunities for profits. The probabilities are that, if these booms occur, they will be generated and propelled by the activities of the government.

The forces which cause growing inequality in the division of the national income among individuals and families are the principal ones which now upset our industrial and business balance. They are the important disturbing forces with which we must deal in the future if we are to stabilize the operation of our industrial system at full capacity. It is evident that, through the NRA codes of fair competition, these income distribution forces were controlled from a direction exactly opposite to the one from which they should have been controlled. Through these codes, profits and property interests received a relatively larger share of the national income, and labor and personal services received a smaller share of it. The codes operated to increase relatively the incomes of the large-income receivers over the small-income receivers. And last, but not least, they strangled production and perpetuated inefficient business enterprises. If that is the only kind of self-regulatory plan our industrial leaders are able to agree upon, their suggestions with reference to the problem of industrial stabilization are not worthy of serious public consideration. Such a plan itself is devoid of any possibilities for the promotion of public welfare.

To accomplish the desired ends and to be of public benefit, any policy designed to stabilize industry and to bring about a better distribution of the national income

must result in a relative increase in the incomes of the low-income receivers, and in a relative decrease in the incomes of the very-high-income receivers. That is, the policy must bring about a decrease in the portion of the national income which goes to profits and property interests, and an increase in the portion of it which goes to wages and personal interests. At the same time, the policy must result in an increase in both physical production and the national income. This is true whether the policy is a self-regulating one voluntarily imposed by the industrial leaders, or whether it is one imposed upon industry by the government.

Considering our recent experiences with the self-regulating NRA codes, one may well question whether our industrial leaders would be willing to impose upon themselves a self-regulating policy which would improve the distribution of the net production value created by industry. On the other hand, recent utterances of several industrial leaders of the country indicate that an increasing number of them now recognize the fact that we shall not be able to operate our industrial system near full capacity in the future without bringing about a better distribution of the national income. A growing number of them are beginning to realize that full and continuous operation of industry now depends upon the current purchasing power of the mass of consumers. They see that if consumers are to purchase the potential finished products of industry, consumers must have adequate incomes. Some of these leaders frankly admit that both full operation and stabilization of industry depend primarily upon a less unequal distribution of the national income and an elimination of unemployment.

Still one may doubt that it would be wise for the nation to depend upon the industrial leaders to formulate and put into operation a voluntary national policy for improving the distribution of the fruits of industry and adjusting hours so as to eliminate unemployment. Most of those who

believe that industry should adopt such a policy recognize that industry as a whole is not likely to do so voluntarily. They recognize that if such a policy of control over the distribution of the proceeds of industry is adopted, it must be adopted and enforced by the government. It is generally admitted that a purely voluntary policy would not be complied with by all the enterprises in the different industries. In short, it is conceded that, in order to be successful, it is necessary for such a policy to be accepted and enforced by the Federal Government.

Since the beginning of the great depression in 1929, there has been much talk about cooperation between the government and business leaders. The NRA represented a cooperative effort of this nature. That plan was designed too much in the special interest of business profits, and too little in the interest of the public as a whole. If there is to be a distribution control plan, is it wise to permit business leaders to dictate the plan?

Thus far, the business leaders have created the public impression that they expect the government to cooperate with them in formulating and enforcing policies designed to advance their special interests. As yet, there is little evidence that the majority of the business leaders are willing to cooperate with the government in the formulation and enforcement of policies to the best interests of public welfare. Until the majority of them are willing to cooperate with the government in the formulation of such control policies, one may well question the efficacy of close cooperation between big business and the government.

Questions of governmental policies with reference to business fluctuations will be discussed in the next chapter. What could or should the government do to bring about a fuller and less fluctuating operation of our industrial system?

CHAPTER X

GOVERNMENTAL POLICIES OF STABILIZATION

SECTION 1

GOVERNMENT CONTROL OVER THE PRICE LEVEL

Some students hold that business and industry can be stabilized by eliminating fluctuations in the general price level. The extreme advocates of this theory maintain that business fluctuations are nothing more than a "dance of the dollar." As a result of a steady price level, they claim, business and industry would be stabilized forever. They maintain also that fluctuations in the price level can be prevented through the enactment and enforcement of correct banking, monetary, and currency policies. Business fluctuations, then, according to this theory, are results of faulty policies in banking, currency, and monetary laws, and can be cured by the government's correcting these policies.

The stable-price theorists hold that fluctuations in the price level are due primarily to a different rate of change in the quantity of purchasing power (money in circulation) from that of the physical quantity of goods offered in the markets. Professor Irving Fisher states the relations between money in circulation and the physical volume of trade in the form of an equation, as follows: $MV + M'V' = PT$. M is the specie and currency in circulation; V is the velocity of circulation of M ; M' is the volume of demand bank deposits; V' is the velocity of circulation of the bank deposits; P is the general price level; and T is the physical quantity of trade. Assuming a constant velocity of circulation of M and M' , in order to preserve the equation, an increase in either money and currency or in bank deposits

would necessitate an increase either in the quantity of trade or in the price level. A decrease in either the quantity of money or in the amount of bank credit would cause a decrease in the price level, if the physical volume of trade remained the same.

There can be no question about the mathematical correctness of Professor Fisher's equation. But one may well question some of the economic conclusions that he and others have drawn from it. He and his followers assume that it would be possible for the government, at all times, to regulate the quantity of both the circulating coinage and currency and the outstanding demand bank deposits in such manner as to keep the general price level from changing. As will be shown presently, there is serious doubt that the Federal Government could control the quantity of outstanding demand deposits of banks, even though it might control the amount of coinage and currency available for circulation. Even conceding that the government might regulate at will the quantity of purchasing power available for circulation, one may still question, or even deny, that such control would result in either stable prices or stable industrial conditions.

It is possible, of course, for the government to change the gold content (or gold equivalent) of the dollar, and to increase or decrease at will the number of gold "dollars" or gold certificates. It is also possible for the government to increase, and possibly decrease, the quantity of currency (treasury notes, gold and silver certificates, and bank notes) available for circulation. Through such action, together with a coordinated fiscal policy, the government might regulate the quantity of coinage and currency in circulation (in the hands of individuals and financial and business institutions). Such a government policy, however, might not determine the number of dollars actually used in the markets currently. It is conceivable that, as a result of changes in the quantity of coins and currency, some of the

money might be hoarded, or some of it might circulate at an unexpectedly rapid velocity. The public attitude toward the monetary and currency policy would have a tremendous influence upon the policy's consequences. The effects upon prices of changes in the quantity of money in circulation depends partly upon how those changes directly affect the current purchasing power of consumers. A government has only limited power to control the public attitude toward its monetary and currency policies, or to determine the economic consequences thereof.

Since from 80 to 90 per cent of all business is ordinarily transacted through bank check payments, and since a large portion of the demand bank deposits against which the checks are drawn originate as a result of bank loans, many stable-price theorists believe that the price level can be kept stable largely through government control of outstanding bank credit. According to this theory, if there was not a corresponding increase in the physical volume of trade, an increase in bank credit would result in an increase in the "money" (purchasing power) in circulation, and tend to raise prices. According to the theory, of course, the opposite of this situation would prevail in case of a decline in outstanding bank credit. It is claimed by these theorists that the government could and should regulate the amount of outstanding bank credit in a manner that would determine the quantity of purchasing power in circulation, and thus stabilize prices.

The use of bank credit in inflating prices during the boom periods of the past has already been pointed out. It is believed that, if the government had adopted and used effective methods of preventing inflationary expansion of bank credit during the booms of the past century, our business fluctuations prior to 1920 would have been of much less magnitude. Our national banking legislation, particularly with reference to the powers of the Board of Governors of

the Federal Reserve System, now gives the government adequate powers to prevent undue expansion of bank credit through loans to individuals and enterprises. If the occasion should arise, however, upon which it seemed advisable for the government, through this Board, to prevent such bank credit expansion, it is yet unknown whether the policy would be applied effectively in face of political opposition directed against its application. It is likely that many businessmen and politicians would oppose any limitations upon credit expansion on the alleged ground that the policy strangled the prosperity of the country.

We know that dangers from industrial expansion movements are less serious today than ever before in this country. The peacetime boom-generating forces have gradually become weaker. At the same time, the supply of new investment funds from current savings has increased relatively. It is not likely, therefore, that there will again be an urge to overexpand bank credit in order to raise funds to take advantage of peacetime industrial expansion movements. There is still real danger, nevertheless, of overexpansion of bank credit as a result of war conditions and of government budgetary deficits. The present power of the Board of Governors of the Federal Reserve System over the expansion of bank credit probably could be used to lessen the ill effects of such credit expansion. This power, on the other hand, might be used to facilitate such credit expansion.

It is extremely doubtful whether the government, through the Reserve Board and the Reconstruction Finance Corporation, could always bring about sufficient expansion of bank credit either to keep prices from falling or to raise them after they had fallen. From 1934 to 1935 these government agencies used most of their powers in an effort to bring about an expansion of bank credit and to raise prices. These efforts failed, and outstanding bank credit continued to decline during that period. Failure resulted, in this case, from the

fact that business enterprises did not desire to borrow additional bank funds to be used in the operation of their businesses. In spite of the low interest rates and the large supply of loanable bank funds, they did not desire to borrow more heavily. Either they had adequate funds of their own, or they did not feel justified, under the circumstances, in expanding their businesses out of borrowed funds. We may conclude, therefore, that the government may either stop the expansion or bring about a reduction in outstanding bank credit, but that it cannot force expansion at will.

If the government, through regulation of the quantity of purchasing power in circulation, should be able to maintain a stable price level for a time, business and industry would not be stabilized thereby. An overinvestment-underconsumption depression may occur under conditions of a stable price level, or even a declining one. When such an unbalanced industrial condition is brought about, the volume of trade, production, income, and employment declines. In short, a depression occurs. Then prices fall, regardless of the monetary and banking policies of the government. During such a depression, outstanding bank credit declines, despite low interest rates and surplus loanable funds. In such a case, the stable-money policy fails to stabilize either industrial conditions or the price level.

An oversaving-underconsumption depression is caused by a maldistribution of the national income. Fluctuations in the price level have little or nothing to do with producing such depressions, and certainly the latter cannot be prevented by price-level control policies. Such depressions can be prevented only by readjusting the great inequality in the distribution of incomes. Not all industrial fluctuations are caused by fluctuations in the price level, as assumed by the stable-price theorists. Their assumption, of course, is false, and because it is false, the stable-price theory is partially unsound.

The upsetting forces in the operation of our industrial system are not confined to fluctuations in the price level. As a matter of fact, stable prices cannot be maintained unless the national money income is divided or distributed in such a manner that consumers are able to purchase, at prevailing prices, the consumers' goods produced and offered in the markets. If too large a portion of the national money income goes to investors, and too small a portion of it goes to consumers, there will be an eventual oversupply of consumers' goods and a fall in the general price level. Nor can a shortage of consumers' purchasing power be cured by raising prices through decreasing the gold content of the dollar or through expanding bank credit. The next section of this chapter will discuss, in some detail, the efforts of the government to cure depressions by an artificial increase of the price level.

During booms and periods of business prosperity, one of the principal disturbing forces in our industrial system is the speculative and harmful use made of both bank credit and investment funds in the purchase of corporate securities. At such times, the prices of corporate securities become inflated and highly speculative, and excessive quantities of new securities are issued by various corporations. Large quantities of investment funds and bank credit are absorbed by the high prices of old securities and the large quantities of new ones. Much of the overexpansion of industries during "good times" is due to the excessive amount of capital invested in them from the proceeds of new securities. The new securities are issued, in many cases, to obtain funds with which to make the unnecessary capital expansions. Much of the speculation in the security markets, heretofore, has been promoted by brokers and dealers in those markets.

The Securities Act (1933), the Stock Exchange Act (1934), and the Public Utility Act (1935) were designed primarily

to prevent misrepresentation and fraud in the issuance and sale of securities in interstate commerce. Undoubtedly, these laws will have the effect of discouraging the overissuance of corporate securities, as well as of preventing excessive use of bank credit in speculation in all securities. Under the Stock Exchange Act, the Board of Governors of the Federal Reserve System has power to prevent excessive bank loans on stock-exchange transactions. The Public Utilities Act gives the Securities and Exchange Commission power to prevent the issuance of fraudulent or useless securities by corporations in the gas and electric industries. Through these acts, the Federal Government now has much power to discourage, if not to prevent, inflationary booms in the securities markets, as well as power to discourage the issuance of unnecessary securities. As a result of these laws, the future should witness a marked decline in the inflationary use of bank credit in the securities investment markets.

The raising of necessary funds for legitimate and needed capital expansion of enterprises should not be impeded. But the issuance of fraudulent securities by promoters should be prevented by the government. The creation of artificial prices of securities, furthermore, as well as the inflationary use of bank credit in the buying and selling of securities, should be prevented. Such activities in the securities markets not only defraud purchasers of securities, but contribute to the upsetting of our business and industrial balance. The country needs honest and stable prices in the securities markets as much as it needs nonfluctuating prices in commodities. Stabilization of commodity prices would not automatically stabilize security prices.

In the third section of this chapter, the question of adequate Federal control over corporations doing an interstate business will be discussed as a measure for bringing about a more equal distribution of the national income. Part of

this discussion will involve the question of greater regulation in the issuance of securities and greater Federal control over the financial structure of these corporations.

SECTION 2

STIMULATION OF BUSINESS BY GOVERNMENT

The strong advocates of the *laissez faire* policy tell us that the best government is that which governs least. They claim that the activities of governments should be limited to keeping peace and order in the realm, and that each individual should be left free to pursue his own economic interests according to his own desires, subject only to the natural economic laws. The advocates of this policy hold that, economically, an individual will best serve the interests of society by being allowed to pursue his self-interest without restraints. They are strongly opposed to any kind of government regulation or interference in business and business activities.

Though all the advocates of the *laissez faire* policy oppose any kind of government regulation of business, many of them are in favor of the government's encouraging business, or even helping it. Protective tariffs, free public resources and services, bounties, and bonuses are advocated by some of the believers in nongovernmental interference with business. They make a definite distinction between *interference* and *aid* by the government. Public interference with private business, they claim, tends to stifle economic progress by restraining private initiative, while public aid to business advances industrial progress by stimulating the economic activity of individuals.

Since the day Adam Smith so vigorously presented the *laissez faire* policy in his book, *The Wealth of Nations*, many students of national economic problems have questioned the soundness of the social philosophy underlying the doctrine and have denied that the public would be benefited by

unlimited and universal application of the policy. With reference to the individual's economic activities, the critics of the theory deny that private interests and public interests are always in harmony, as assumed by the *laissez faire* advocates. They claim that many of the individual's acquisitive activities, as distinguished from his productive activities, are frequently detrimental to public welfare. Under monopolistic conditions, they point out, it may be to the self-interest of producers to limit production and raise prices contrary to public welfare. Moreover, self-interest of producers suggests that they agree upon limiting production and raising prices, as well as that they agree upon wages and labor conditions for employees. Even Adam Smith admitted that the efficacy of the *laissez faire* policy was limited to a competitive economic system and that it would break down under conditions of private restraint of trade.

Many students believe that unrestrained competition was never so general, and that private restraints of trade were never so insignificant, as assumed by the strong advocates of the *laissez faire* policy. Whatever may have been the actual business and industrial conditions during the days of Adam Smith, with reference to the absences of private restraints of trade and fraudulent business transactions, monopolistic restraints certainly have increased since then. The development of machine production by giant business enterprises has resulted in widespread restraints of trade in our national markets and in actual monopolization of many of our major industries. Financiers, promoters, and business managers now engage in many activities relative to the organization, financing, and operation of business enterprises which are highly profitable to them, but which are contrary to public welfare. It is admitted by most students of our present national economic problems that, in the interest of the wealth and welfare of the nation, a consider-

able amount of government regulation of private economic activities is not only advisable, but necessary.

It is generally recognized, however, by both the proponents and the opponents of the *laissez faire* policy, that, from the businessman's point of view, there is a real difference between a government policy of aid to business and one of regulation of business. The first is designed primarily to benefit business enterprises and their owners, and thereby indirectly benefit the public; the second is designed to curb harmful activities of business managers, and thereby directly benefit the public. The advocates of public regulation of harmful business activities may also endorse certain business-aid policies. In other words, they believe that the government may regulate certain business activities and, at the same time, aid or stimulate others. The remainder of this section will be devoted largely to a discussion of governmental policies to aid or stimulate business. The consequences of government regulation of business will be discussed in the next section.

Various business interests constantly seek special legislation and specific government action that would give them special privileges and advantages. Various manufacturing interests asked for and secured protective tariff laws which enable them to shut out foreign competition, increase production, and raise the prices of their products. The railways of the West were given large areas of the public domain to aid in their construction and development. Bankers and business leaders secured "liberalization" of banking and corporation laws which gave them special advantages and privileges in the organization, financing, and operation of their businesses. Trade treaties with foreign nations have been made by the government in the interest of American business enterprises. Such have been the business-stimulation policies of the government during ordinary times. They were adopted under the assumption

that the whole nation would benefit as a result of the special benefits to business. Some of the business booms of the past were facilitated, if not actually generated, by business-stimulation activities of the government.

During crises and depression periods, it has frequently been claimed by some businessmen and by many partisan politicians that the decline in business and industry was brought about by unwise activities of the government. The alleged unwise government action consisted either of repeal of certain business-stimulation laws or policies, or of the passage of new business regulatory legislation. Lower tariff rates, new monetary and banking laws, and antitrust laws have frequently been pointed out as causes of depressions. In the minds of many businessmen, any kind of business regulatory legislation tends to produce business depressions, while most business-stimulation legislation tends to produce "prosperity." Few serious students of the problems of business fluctuations, however, agree that adverse government policies have played a significant part as basic causes of business crises and depressions. They claim that business recessions are brought about by business and industrial maladjustments which occur during the "good" times preceding the depressions. It is conceded by them that actual or threatened changes in government policies toward business may have facilitated, or even precipitated, the occurrence of impending depressions.

As already pointed out, when a major business depression occurs, there is always a strong public demand that the government do something to cure the depression. At such times, means are usually sought for increasing the supply of money through proposed monetary, currency, and banking changes. There is then a strong public demand for an increase in the price level. Ordinarily, in the past, an improvement in business has caused a subsidence of price

inflationary proposals. Higher tariff rates and the repeal of business regulatory measures have frequently been advocated as business recovery measures. Business interests have often advocated government policies of foreign trade stimulation as recovery measures.

Because of the length and severity of the 1929 depression, there was a stronger and more widespread public demand than ever before that the government do something about the business situation. In 1932-1933, many of the big business leaders requested that national legislation be passed. The primary object was to help business withstand the depression, and the secondary motive was to bring about recovery. Farmers, laborers, and other economic classes also requested relief and recovery legislation by Congress. As a recovery program, not a few demanded legislation to bring about reforms in the organization, financing, and operation of business enterprises, through a more strict government regulation of certain business activities. In response to this public demand for governmental action, the Roosevelt Administration enacted and put into operation a great number of relief, recovery, and reform measures, which became known as the New Deal policies. Only those New Deal measures which were designed directly or indirectly to stimulate recovery will be considered here.

The following New Deal measures were designed directly to stimulate business and bring about recovery: the monetary, currency, and banking acts, the NRA legislation, and the Public Works laws. The unemployment relief law (FERA) and the debt relief law, as well as the agricultural adjustment acts, were intended primarily to bring relief, but secondarily to stimulate recovery. Even the Securities Act, the Stock Exchange Act, and the Public Utilities Act, though primarily reform measures, were claimed by some to be indirect business-stimulation measures. A brief estimate of

the recovery effects and consequences of this New Deal legislation follows.¹

In 1933, prices rose temporarily and production increased as a result of the Roosevelt monetary policy of going off the gold standard and reducing the gold content of the dollar. The National Emergency Banking Act and the Banking Act of 1933 reestablished confidence in banks and permitted a more normal use of banking facilities. This legislation helped to stop the downward trend of the depression. As previously pointed out, the NRA produced a rise in prices but a decline in production during the last half of 1933. Production and employment were stimulated considerably by the Public Works program—the PWA, the CWA, and the FERA "made work." The economic conditions of farmers were improved by the agricultural and debt adjustment legislation.

The banking, debt refinancing, and agricultural adjustment measures were reform measures badly needed to fit the situation then existing. For that reason, the business improvement resulting from them was on a solid basis. There was no real national industrial improvement as a consequence of the NRA, though it temporarily raised the profits of the large industrial enterprises. The business and industrial improvement resulting from the monetary and public works policies was highly artificial and temporary. It is believed that both these policies, in the long run, will prove to be more harmful than helpful. Let us examine briefly the reasons for this conclusion.

Artificial inflation of the general price level created a temporary increase in the volume of sales. Individuals desired to exchange their dollars of declining value for goods of rising values. Because of the artificial rise in prices and in the volume of sales, there was some increase

¹ For a full discussion of the effects and consequences of the New Deal measures, see the author's *National Economic Security*, Chapters VIII to XIX.

in the volume of production, but the increase in the incomes of consumers was less than the increase in the value of the goods to be sold to them. Prices rose faster than wage rates, and production increased at a greater rate than employment. If consumers' purchasing power derived from industry had not been greatly supplemented, from 1933 to 1936, with public funds paid out through the FERA, PWA, and AAA, there would have been a great recession of prices and production as a result of the inflational movement of 1933. A business relapse following such a movement would leave business and industry in a condition worse than that which prevailed before the price inflation was brought about.

It appears highly probable that a business revival promoted or sustained by large public expenditures financed through public borrowings will last only so long as these public expenditures last. Such a program gives incomes (purchasing power) to a large number of people through doles or public works, which payments are not derived from the production of salable goods. As a result of the large government payments from 1933 to 1936, business became adjusted to the large artificial (credit) consumers' incomes furnished by the government as a supplement to the national income derived from current industrial production. This supplement to consumers' incomes increased their current purchasing power to a point considerably above what it would have been if they had depended solely upon incomes derived from private industry. But when the budget is balanced, and the large public expenditures end, that part of consumers' incomes now supplied by government expenditures will be cut off. Both the consumers' demand and the demand for constructional goods will decline. It is likely, then, that prices and the volume of production will also decline. The resulting depression may be severe.

The government's stimulation recovery policy proceeded upon the false assumption that nothing was fundamentally wrong with business. It assumed that the depression was caused largely by financial difficulties and psychological attitudes. The advocates of this policy claimed that business had stopped on a dead center, and that the business pump had run dry. They claimed that all that was needed to restore prosperity to the country was for the government to supply the kickoff to set the wheels of industry going, and to prime the business pump by inflating prices and entering upon a program of large public expenditures. Once industry was set going at full speed ahead, they said, the natural economic forces would restore lasting prosperity to the country. It was asserted that the government would be able to withdraw its business-stimulation program without injury to business, once the natural recovery forces were brought into operation.

It has been pointed out already that the fundamental force which produced the 1929 depression was a relative surplus of savings achieved by the very-high-income receivers and a relative deficiency of incomes suffered by the mass of consumers. The lack of balance between industry's productive capacity and consumers' purchasing power was the principal reason for the severity and long duration of this depression. The stimulation-recovery policy tended to increase this lack of balance in our industrial system, rather than to lessen it. Price inflation inevitably results in greater inequality in the division of the national income. For that reason, it brought about a relatively larger deficiency in consumers' purchasing power in proportion to the physical volume of production. This industrial disequilibrium cannot be cured by substituting large government expenditures from public credit for the growing deficiency in consumers' incomes which are derived from private industry. It is believed, therefore, that there will be a recession in business

when the government withdraws this artificial business stimulant. And eventually the stimulant must be withdrawn.

SECTION 3

RELATIONS OF GOVERNMENT REGULATION TO STABILIZATION

If governmental policies are to be employed to stop cyclical fluctuations in business, such policies must be directed largely toward preventing the occurrence of depressions. If depressions are to be avoided, then, the business and industrial situations which produce them must not be allowed to develop. Once the unbalanced industrial conditions of a boom or of a period of business prosperity are allowed to developed, a subsequent depression is inevitable. When a depression occurs, as pointed out in the previous section, it is not wise for the government to attempt to stop it, or to bring about a quick recovery, by applying business-stimulation policies. To cure depressions, it is necessary to control the forces that produce them; that is, it is essential to control inflationary booms or oversaving-underconsumption conditions.

If the government is to adopt policies to prevent the development of booms or of oversaving-underconsumption situations, caution must be exercised in formulating those policies, so that they will not retard or interfere with the full operation of our industrial system under balanced industrial conditions. Regulatory policies which would stop or greatly retard industrial progress, or which would limit production and consumption of finished goods and services, might result in a net injury to society, though they might stop business fluctuations. On the other hand, no policy should be adopted by the government which would promote the development of inflationary booms or even tend to encourage them. Nor should any of the government's policies promote greater inequality in the division of the national income, or encourage the growth of an unbalanced overin-

vestment-underconsumption condition. Either of these industrial conditions retards steady and sound economic progress. All these precautions are followed in presenting the governmental regulatory policies here proposed.

Changes in monetary, currency, and banking policies which cause either inflation or deflation of prices should be avoided. Budgetary deficits should not be financed through the issuance of treasury notes or loans from banks, and the monetary system should be kept on a fixed gold basis. The government should have and exercise sufficient power over the expansion of bank credit to be able to prevent its use to inflate prices and other values. In other words, on the one hand inflational booms should not be generated by governmental monetary, currency, fiscal, or banking policies, and on the other, the government should control the expansion of commercial and investment bank credit in such a manner as to prevent the development of inflational booms. It is believed that the National Banking Act of 1935, the Securities Act of 1933, and the Stock Exchange Act of 1934, considered together, give the government adequate power to prevent the inflational use of both commercial and investment bank credit.

It is not believed that it is necessary or advisable for the government to attempt to regulate or control directly the boom-generating forces in order to prevent the occurrence of booms in the future. There are no new territories to be settled. Discovery and exploitation of new, rich, and valuable mineral resources in the future are not likely to create sufficient prospects of profits to generate boom conditions. We shall doubtless have further development and reorganization of old industries, but because of our comparative industrial maturity, it is not thought that such industrial expansion movements will generate booms which cannot be controlled through government regulation of the expansion of bank credit. New industries will also be developed in the

future, but it is not believed that they will be of sufficient number or magnitude to cause rapid industrial expansion movements.

Government regulation of the introduction and use of new machinery, new processes, and new types of goods is not needed, and, if tried, it probably would retard or actually prevent future industrial progress. If the government should take any action with reference to the use of new inventions, it should enact measures providing for their freer and more general use. This result might be accomplished by forcing inventors or owners of patents to license or lease them on a standard royalty basis to anyone who desired to use them. In case a patent was owned by an industrial enterprise which used the patent in its own operations, the royalty rate for use by others should be subject to regulation by the government.

Unless there is a trend toward a more equal distribution of the national income, it is probable that the country will suffer from many overinvestment-underconsumption depressions in the future. If the inequality in the division of the income becomes greater, it is believed that depressions from this cause will become quite severe, if not disastrous, and that little or no future economic progress will be possible. The so-called natural economic forces, aided by special privileges and advantages, apparently are working toward higher concentration of both wealth and income in the hands of the few. There is little or no evidence, moreover, that either the leaders of big business or the very wealthy capitalists will voluntarily bring about reforms toward a more equal division of the nation's income. If such national reforms are made, therefore, they must result from government regulatory policies.

What kind of regulatory or control policies should the government inaugurate for the purpose of accomplishing a more equal distribution of the national income? In the

opinion of the author, the Federal Government should adopt and enforce the following regulatory policies for this purpose:

1. First of all, the various special privileges and advantages now exercised by many promoters, underwriters, directors, and other "insiders" of large corporations, in acquiring personal control over these corporations to the detriment of others, should be eliminated. To do this, Congress should pass an act providing for Federal incorporation of all business enterprises which engage in interstate commerce. This Federal corporation law should contain the following features: (1) a simplification and standardization of the kind of corporate securities which might be issued; (2) the requirement that each corporation secure specific permission from a Federal Corporation Commission before issuing any new security, or before making any changes in the corporate structure;¹ (3) an adequate clause preventing unnecessary holding companies in all industrial fields; and (4) the requirement that corporations render adequate and true financial reports.

Such a law would probably stop most of the special privileges and advantages now accorded corporation promoters, insiders, and manipulators by the present liberalized state corporation laws. Under a strict Federal corporation law, it would not be possible for a few insiders with the investment of little money, to acquire control of corporations and to secure the major portion of their profits at the expense of the real investors in those corporations. The antiholding company provision of the law would strike at the heart of the industrial combination problem in this country.

2. To reduce further the special privileges now enjoyed by large monopolistic industrial combines, the government

¹ To secure such permission, the directors of a corporation should prove that the new securities or the proposed changes in the corporate structure are needed, and that the equitable interests of all security holders concerned are adequately protected.

should eliminate protective tariff rates on all goods produced by monopolistic and highly organized industries, and inaugurate a Federal license system for all firms doing an interstate business. Through this license system, most of the private agreements with reference to prices and volume of production could be eliminated. The government should also enforce the antitrust laws now on the statue books, and strengthen these laws by giving the Federal Trade Commission more enforcement power.

3. The government should continue the present national policy of taking agricultural lands out of cultivation to the extent to which the market supply of agricultural products and the market demand for them are equalized at a point where the prices of agricultural products will be in line with the prices of industrial products. Only through some such agricultural policy will it be possible to increase substantially the portion of the national income received by the low-income agricultural classes. If the nation is to increase the purchasing power of consumers relative to the total volume of production, the incomes of the very-small-income receivers must be raised. The agricultural industry constitutes nearly 30 per cent of the consuming population. It is estimated that in 1929 the farming class received only 18 per cent of the national income.

4. The policy of refinancing farm and home mortgages at lower interest rates is a sound one and should be continued. Through regulation of the banking system, the government should be able to keep interest rates low. Since the World War, far too large a portion of the current incomes of farmers, small businessmen, and homeowners has been paid out as interest on debts. A reduction of interest payments relatively increases the consuming power of these small-income receivers.

5. It was pointed out previously that, largely because of the disappearance of the frontier, the growth of large employ-

ing enterprises, and the increasing use of automatic machinery, the increase in the wages of industrial laborers has not kept pace recently with the rise in the value of the net production of industrial enterprises. This lagging of wages behind net value produced is one of the principal causes of the growing inequality in the division of the national income. It is believed that the government can and should adopt a policy to remedy this situation. First, the government should limit the weekly hours of work of industrial laborers in the major industries sufficiently to force industry as a whole to absorb all the unemployed laborers. Elimination of the surplus supply of laborers would tend to raise wage rates per hour. If the shorter hours should fail to increase the portion of the net production of industry which goes to laborers as wages, the government should exercise direct power to raise the wage scales of all laborers in the major industries.

6. The burden of taxation to support the government should fall more heavily than heretofore upon the profits of enterprises and large personal incomes. Practically all the Federal revenue should be derived from the net profits of business enterprises, from the incomes of the large-income receivers, and from the inheritance, gift, and succession taxes. There should be no processing or special sales taxes, and import duties for revenue purposes should be discontinued.

Unquestionably, the inauguration of the above-mentioned governmental control measures would be strongly opposed by the leaders of big business. It is probable, also, that the application of the policies would have a temporary depressing effect upon business conditions. The reduction or elimination of special business privileges by the government has always affected business conditions in a temporarily adverse manner. It is believed, however, that the adverse results of such regulatory policies would be only temporary.

The more balanced industrial and economic conditions resulting from these policies would lay the basis for continued progress in production and consumption in the future. Without a less unequal division of the national income, future economic progress in this country is uncertain, if not impossible.

Opponents of the proposed reform measures probably will claim that none of them are needed. Some of these opponents will deny that unequal division of the national income is a cause of depressions. Others will claim that the so-called natural economic forces will correct those evils which now exist as to income distribution. Still others will say that the proposed remedies would produce results more undesirable than the maldistribution of income.

The author, as pointed out in his book, *National Economic Security*, does not consider any of these objections to the suggested regulatory policies to be valid. In the above-named book, he pointed out how and why maldistribution of the national income caused the industrial breakdown in 1929. He also showed that, under the so-called natural economic forces, individual incomes were becoming more unequal from year to year. There is little or no logical basis, moreover, for assuming that the proposed corrective measures would produce problems more serious than the one they are designed to correct. If an actual deficit in current savings should result from these policies, the policies could be relaxed to correct that evil. It is not believed, however, that the application of the proposed measures would cause a deficit in current savings. After the necessary adjustments in the national income had been made, there would be a solid basis for steady progress in production and consumption in the future.

CHAPTER XI

SURVEY OF BUSINESS CYCLE THEORIES

SECTION 1

BASES FOR VARIOUS CYCLICAL THEORIES

It is probable that all students of business cycles would agree that, under any economic system other than capitalism, the cyclical fluctuations of the past would not have occurred in the manner they did. In other words, under communism or fascism they could not have occurred in the same form, and for the same reasons, that they did under our capitalist system. All would agree that modern business cycles are the product of the capitalist system, with its freedom of contract, price, and profit-seeking institutions. Whatever the nature of the industrial fluctuations which might occur under some other kind of economic system, it is conceded that they would be vastly different from those we have actually experienced. In the main, all would agree that, under the private enterprise and price institutions, the profit-seeking activities of businessmen account for the character of our business fluctuations.

Since the beginning of the twentieth century, most writers on business fluctuations have explained them largely in terms of present and prospective profit margins of business enterprises. They have agreed almost uniformly that whatever causes a widening of the actual or the prospective profit margins of business enterprises will produce an uptrend in business and industry, and that whatever causes this margin to be lowered will produce a downtrend. None of them deny the proposition that a general rise in either the relative

market demand¹ or the prices of goods, or a fall in the cost of production, will result in an increase in present and prospective profits of enterprises. They agree, also, that a fall in either the relative market demand or in prices, or a rise in production costs, will cause a decline in the profit margins. With few exceptions, cycle theorists agree that industrial production and general business conditions rise and fall directly with the fluctuations in the present and prospective profit margins of business enterprises.

All cycle theorists do not agree, however, on the exact part each one of these three profit-margin-determining forces has played in the past in producing fluctuations in profit margins in business enterprises. Neither do they agree as to what factors or forces produce changes in these profit-margin-determining forces. Some claim that changes in each are brought about by the mere operation of our economic system, with its exchange economy. Others emphasize variations in the price level as the chief cause for fluctuations in profit margins, placing little or no emphasis upon variations in the relative market demand for goods as the basic cause for the changes in the price level. This particular group of theorists usually explains price variations in terms of fluctuations in the amount of outstanding purchasing power (coinage, currency, and bank credit), rather than in terms of changes in the relative market demand for goods.

Some theorists claim that many fluctuations in the relative market demand, as well as in prices and in outstanding bank credit, are brought about originally by changes in prospective (rather than present) profit margins. They hold that fluctuations in prospective profit margins in business are frequently induced by the operations of the industrial development forces. The opening of new territories, the discovery of new resources, the invention of new technologi-

¹ Relative market demand means the current market demand in relation to the physical volume of production.

cal methods of production, and the development of new industries are emphasized by them as important factors in bringing about variations in prospective profits in industry. Fluctuations in actual profit margins, they say, result from changes in the relative market demand for goods, from price fluctuations, and from changes in outstanding bank credit. Application of these development forces also causes a reduction of the cost of production in the industries affected.

Still other theorists emphasize the rise and fall in the relative market demand for goods as being the chief cause for the rise and fall in prices, cost of production, and outstanding bank credit. They lay particular stress upon variations in the relative demand for producers' goods as the chief cause for cyclical movements. They think that changes in the relative demand for such goods are due to the overexpansion of the consumers' goods industries, as well as to the activities of the industrial development forces. It is believed by them that changes in the government's policies toward business may temporarily affect the relative demand for producers' goods. Overexpansion of the consumers' goods industries is thought to be due to the unequal distribution of the national income. The unequal incomes, these theorists maintain, cause a relative shortage of consumers' purchasing power and a market oversupply of consumers' goods.

To summarize, we may say that all theorists agree that variations in profit margins facilitate, if they do not cause, fluctuations in industrial and business conditions, and that profit margins are measured by the relationships among the three following factors: (1) the relative market demand, (2) the price level, and (3) the cost of production. They are not agreed, however, as to which of the three factors is the basic or most important one, nor as to what forces bring about changes in each. Moreover, some of the theorists do not believe that all variations in prospective profits are

instituted by initial changes in one or another of these three profit-determining factors. They claim that activity of the industrial development forces, and changes in the distribution of the national income, may cause variations in the prospective profit margins; and that these new prospective profit margins, in turn, generate business activities which bring about changes in the relationships of the three profit-determining factors.

Why has there been so much disagreement among students as to the generating and propelling causes for business fluctuations? One of the principal reasons for wide disagreement is the lack of unanimity of opinion as to which of the fluctuating phases of the trend of business constitutes the beginning, and which constitutes the end, of a cycle. Some believe that each phase of the fluctuating business trend generates forces and conditions which cause the succeeding phase. They claim that business fluctuations have no beginning or ending, and that a complete cycle can be marked from the beginning of one crisis to the beginning of the next, or from one depression to the next, or from one recovery period to the next, or from one boom to the next. According to them, any four successive phases of the fluctuating trend of business constitute a business cycle.

Others deny that business, at all times, is passing through one or another of the phases of a cycle. They hold that all major cycles have a definite beginning and a definite ending. Booms or periods of business prosperity constitute the first phase of such cycles, according to their belief. This first period, they claim, is followed by a depression and a crisis, which in turn are followed by a recovery period. They assert that the recovery period is the last period of a major cycle, and that conditions developed by it do not produce a succeeding boom.

According to the first concept of business cycles, the basic causes of cyclical fluctuations are to be found in the natural

operation of our industrial system under capitalism. To the adherents of this first concept, a complete explanation of the causes of cyclical fluctuations consists of an exposition of the forces and conditions developed by each fluctuating phase. This is true, they say, because the forces and conditions of each phase produce the succeeding one. According to the second concept of cycles, the basic causes of the movement consist of whatever forces generate booms or periods of business prosperity. Its champions deny that booms or periods of business prosperity are caused by forces generated by a previous period of recovery.

Both classes of theorists agree that booms, or periods of business prosperity, develop business and industrial conditions which make crises and depressions inevitable, and that depressions usually have created conditions that make recoveries possible, if not inevitable. Most writers belonging to the first class of theorists hold that business cycles are inevitable, and that they are not subject to social control. None of the theorists in the second class accepts this fatalistic conclusion. On the contrary, most of them hold that, through social control over the forces which cause booms and periods of business prosperity, the trend of business could and should be reasonably stabilized.

Those who believe that cycles have neither beginning nor ending, and that any four successive fluctuating phases of the trend of business constitute a complete cycle, find innumerable "causes" for the cyclical movements. To them, each economic force which operates during any phase of the business trend is one of the causes for the succeeding change in the trend. To those who look at the boom, or the period of business prosperity, as being the first period of every major cycle, the forces and conditions which develop during each phase, and which produce the succeeding one, are merely forces which propel the cycle through its natural course. They are not the *generating* causes of the cycle;

they merely explain its course of development. These theorists hold that only those forces which produced the boom, or the business prosperity period, generate or cause cyclical movements. Consequently, they find fewer "causes" of cycles than do the theorists of the first class.

Another important reason for lack of uniformity in business-cycle theories is to be found in the differences in the economic philosophies of the various theorists. Those who accept the neoclassical, or "orthodox," concepts of the organization and operation of our economic system are unable to find any serious defects in its operation. They believe that the principal economic forces of our business and industrial system, at all times, are either in a balanced state or in the process of becoming so. Say's *law of the markets* and the competitive-price theory are accepted as proof that our industrial system could never get far out of balance in its operations. These advocates of the neoclassical concept believe that under the *laissez faire* policy the laws of rent, interest, wages, and profits will always distribute the national income in a workable, if not in an equitable manner. To many of them, business cycles are merely the necessary growing pains of our complicated and delicately balanced economic system. A few of the orthodox theorists believe that all serious cyclical disturbances are caused either by unwise money and credit policies or by other unwise government policies.

There are many economists who do not accept the orthodox theories as an adequate interpretation or a truthful estimate of the economic system. Neither the socialistic nor the institutional economists accept the orthodox theories as an adequate explanation of the operation of economic forces. The socialists believe that capitalism is doomed to failure, because they believe that it is operated largely in the interest of the capitalist class. They look upon orthodox economic theory as an apology for an unworkable, indefensible

economic system. To them, crises and depressions furnish irrefutable evidence of the unworkability and the "rotteness" of the capitalist system.

The institutional economists neither defend nor condemn capitalism as an economic system. They merely study our industrial and business system to find out how it actually operates. They accept some orthodox theories as workable general hypotheses of relationships, and reject others as inadequate or impracticable statements. Their chief objective is to discover the actual relationships existing in the operation of our economic system. They desire to find the strong and the weak points in its working. They assume neither perfection nor its opposite in the system, and, therefore, they do not start out with the object of proving either. After investigation, some of the conclusions of both orthodox economists and socialists may be accepted by them. In their view, the causes of business cycles, regardless of their nature or implications, are to be discovered by investigation and analysis.

Still another good reason for wide divergence of opinion as to the cause or causes which originate the business cycles is that some students are willing to accept, immediately, determining forces as causes *per se*. Others accept them merely as occasions for movements, and desire to go behind them and discover what causes each one or makes it effective. For example, one student may accept the expansion and contraction of bank credit as the principal force causing prices to rise and fall, while another may admit the effectiveness of expansion and contraction of bank credit upon prices, but seek the force or forces which brought about the expansion or contraction of credit as the fundamental cause in the case.

No two theories of business fluctuations are exactly alike, because individuals differ in their concepts as to (1) the nature of business cycles, (2) the methods of analysis, and (3) the acceptance of causes as immediate or ultimate. Differences

in data studied and variations in the ability to correlate correctly the information available, also, account for differences in individual theories. Consequently, it is difficult to classify the numerous theories under a few general headings. Those placed in any one class might have some common characteristics, but, at the same time, they would have many conflicting ones. Most writers on business cycles, moreover, object to having their theories specifically classified by other writers. It is very difficult, lastly, to classify correctly the ideas of most writers on cycles.

No attempt will be made in this chapter to discuss, or even to mention, all the writers on various theories of business cycles. Only the theories which are concerned with the generating causes of cyclical movements will be considered, and they will be discussed according to types of theories, rather than according to authors. In presenting these typical theories, no attempt is made to give the complete cyclical theory of any particular author. Names of some authors will be mentioned in connection with their acceptance of certain forces or factors as generating causes.

Cycle theories on causes of cyclical movements are here classified under the following four general headings: (1) those which hold that the causes of business cycles are to be found in the innate nature of our economic system, with its exchange economy; (2) those which claim that the basic causes lie in variations in the quantity of money and bank credit; (3) those which assert that the fundamental causes consist of the specific forces which produce variations in the capital expansion of business enterprises; and (4) those which maintain that cycles are due primarily to inequalities in money incomes. Some authors suggest special causal forces not included in any of the four classes of theories here discussed. Psychical wave movements and mass psychology are here assumed to be results rather than causes. They could be secondary causes, at best; but a few authors consider them as primary causal forces in cyclical movements.

SECTION 2

THEORIES OF EXCHANGE ECONOMY AND OF MONEY AND CREDIT

A. NATURE OF OUR EXCHANGE ECONOMY

All writers on the problems of business cycles may be classed as exchange-economy theorists in the sense that they recognize our money and exchange economy as an essential feature of capitalism, and in that they admit the nature and characteristics of the fluctuations in the trend of business to be due to the capitalist system. Without the exchange or money economy, together with the profit system and the roundabout methods of production, the ups and downs which would occur in our industrial system would be quite different from the business cycles of the past. Most students of cycle problems, however, do not believe that the fluctuations of the past were an inevitable by-product of our exchange economy.

On the other hand, there are some who hold that cyclical fluctuations necessarily result from the natural operation of our industrial system under the competitive price and profit institutions. Our exchange economy, they think, makes business cycles unavoidable. They claim that because of the roundabout methods of production, and the unregulated methods of competition among enterprises in production and sales, it is not possible to maintain an equilibrium between the market supply of goods in general and the market demand for them. It is inevitable, they claim, that under the dynamic conditions of industrial change, a disequilibrium between general demand and general supply in the markets will bring about changes in the general price level. These changes in the price level, they point out, will affect profit margins and will cause the trend of business to rise or fall, according to the direction of the price-level changes. The theorists of this class believe that cycles are

self-generating; that is, they believe that each cyclical phase develops conditions and forces which produce the succeeding phase, and that our economic system is going through some one phase of a cycle at all times.

The roundabout scheme of production, and the absence of an effective central directing agency to coordinate the activities of all business enterprise, are thought to be largely responsible for the inability of our economic system to operate continuously in a balanced state. These theorists hold that the "natural" economic forces of competitive prices, costs, and profits tend always to establish a balance in the system, but that the dynamic forces of economic change constantly upset its equilibrium. They say that mistakes in judgment of business managers and ignorance of what competitors are doing are the chief reasons why industrial changes temporarily upset the balance in industry and business. These mistakes produce a disequilibrium between the demand for goods and the supply of goods. The long span of time which elapses between the beginning and the end of the production of consumers' goods is largely responsible for the mistakes and misjudgments made by managers of business enterprises. The consequent unbalanced condition in the market causes fluctuations in the price level, which in turn produce fluctuations in the general trend of business.

These theorists deny that special occurrences such as wars, the opening of new territories, and the exploitation of new natural resources are essential for the generation or initiation of business cycles. They admit, however, that these occurrences do increase the tempo and magnitude of such fluctuations. They look upon the development of new industries, as well as upon changes in old ones, as an innate characteristic of our dynamic economic system. These industrial changes set in motion business movements which cause business managers to make mistakes and which

finally upset the industrial balance. These theorists thereby recognize that some of the industrial development forces exert an influence in causing business fluctuations, but they claim that these causal forces are innate characteristics of our economic system.

This school of thought, moreover, does not believe that business cycles are generated by the manner in which the national money income is distributed. Some of its members, however, think that the lag of wage and interest rates behind the rate of profits during the up and down movements influences the magnitude and intensity of the movements. All of them recognize that changes in monetary, currency, and bank credit policies and conditions directly affect cyclical fluctuations. But the majority of them look upon changes in the available supply of money and credit as facilitating rather than causal forces. The cycle theories of the following well-known writers, in the main, may be classified as exchange-economy theories: Lescure,¹ Mitchell,² Beveridge,³ and Pigou.⁴ Several other writers accept most of the concepts of the exchange-economy theorists, but stress certain special factors as being the determining forces in each cyclical fluctuation.

The exchange-economy theorists have assembled a great deal of statistical, descriptive, and analytical information as to just what happens to prices, production, sales, profits, wages, interest, rents, and other economic factors during various cyclical phases. They have endeavored to use this information to prove that developments and conditions during each phase generate the succeeding phase. Our knowledge of the interrelationships of the different cyclical phases has been considerably enriched as a result of their work.

¹ Jean Lescure, *Des Crises générales et périodiques de surproduction*.

² W. C. Mitchell, *Business Cycles; Business Cycles—The Problem and Its Setting*.

³ W. H. Beveridge, *Unemployment*.

⁴ A. C. Pigou, *Industrial Fluctuations*.

In the opinion of many students, however, the exchange-economy school has failed to prove that booms, or periods of business prosperity, are generated either by preceding recovery periods or by the natural operation of our industrial system. While few theorists believe that, under a *laissez faire* policy, our industrial system could ever operate without any fluctuations in the trend of business, many of them today doubt that major fluctuations are due primarily to the innate or ineradicable characteristics of our economic order. The majority appear to believe that major fluctuations are due primarily to forces which are subject to social control. Many of them believe that effective control measures could be applied without destroying either the price and profit system or the roundabout methods of production, or without limiting freedom of price competition.

B. VARIATIONS IN QUANTITY OF MONEY AND CREDIT

There are several theorists who believe that all business fluctuations are caused by disturbances of a monetary, currency, or credit nature. It is assumed by them that, without such disturbances, there would be no ups and downs in the business trend. To them, there can be nothing wrong with the operation of our economic system. They believe that it would remain in a perfect balance under the right kind of monetary, currency, and banking policies.

Business cycles, in the opinion of the extreme theorists of this school, are due entirely to fluctuations in the general price level. All fluctuations in the price level, according to their views, result from changes in the value of money (purchasing power of the dollar), and all fluctuations in the value of money are due to unwarranted changes in the quantity of money in circulation. They believe that, if the correct quantity of money were kept in circulation at all times, a stable price level would prevail indefinitely, and that

would make impossible any fluctuations in the trend of business. One of these extreme theorists summarized his conclusions on this point by saying that business cycles are nothing more than a "dance of the dollar."¹

It is their contention that the value of the dollar (the price level) could be stabilized through the proper government control over the monetary, currency, and banking policies of the country. All that is necessary to stabilize the price level, they tell us, is to regulate the quantity of purchasing power in circulation (money, currency, and bank deposits) in such a manner that there will be a constant equilibrium between the available quantity of money (purchasing power) and the physical quantity of trade. To them, this is a comparatively simple problem because: first, the physical volume of trade and production, when not disturbed by monetary difficulties, will have a rather constant rate of growth; and, second, the quantity of available purchasing power can easily be regulated by the government through the proper policies.

They suggest that the government regulate the quantity of coins in circulation by changing, from time to time, the gold content or the gold value of the monetary unit (the dollar) and by increasing or decreasing the quantity of outstanding silver dollars. They would regulate the quantity of currency in circulation either by having the government issue and withdraw treasury notes or by having the banks of issue increase or decrease their outstanding bank notes. The quantity of outstanding demand deposits of banks could be controlled, they think, by having the government regulate the loan and discount activities of the banks. Since a large portion of the demand deposits of banks, at any one time, are derived from the proceeds of outstanding bank loans and discounts, an increase or a decrease in bank loans

¹ Irving Fisher, "Our Unstable Dollar and the So-called Business Cycle," *Journal of the American Statistical Association*, June, 1925, Vol. XX, pp. 191, 192.

will cause a corresponding change in demand deposits. They believe, of course, that the government, through the proper banking policies, could bring about either an increase or a decrease in the outstanding volume of bank loans at any time.

The principal advocates of the money and bank credit theories of business cycles are Hawtrey,¹ Fisher,² and Warren.³ Many writers on cycles, if not most of them, have recognized a connection between monetary, currency, and banking policies on the one hand, and business fluctuations on the other.

Probably no cycle theorist would deny that an appreciable change in the gold value of the dollar would result in a change in the general price level, and that such a change in the price level would temporarily influence the general trend of business. Few, if any, would deny that a sudden and large increase or decrease in the quantity of coins and currency in actual circulation would bring about an immediate increase or decrease in the general price level, and thereby, at least temporarily, affect the general trend of business. So far as known, all theorists recognize the fact that most rapid rises in the price level, if not all of them, are attended by an expansion of bank credit, and that all its rapid declines are attended by a contraction of bank credit. To a greater or less extent, all recognize the money side of the exchange equation (the quantity of money in use) as being an important factor in determining the level of prices.

Only the devout money and credit theorists, however, believe that all changes in the general price level are initiated by changes in the quantity of purchasing power in circulation. In the opinion of a great number of other theorists,

¹ R. G. Hawtrey, *Good and Bad Trade; Currency and Credit; Monetary Reconstruction; Trade Depression and the Way Out.*

² Irving Fisher, *The Purchasing Power of Money; The Money Illusion.*

³ George F. Warren and W. M. Persons, *Gold and Prices.*

only a few cyclical fluctuations in the general price level have been initiated by changes in the quantity of money and currency in circulation, and those instances have been limited to cases of inflation of government credit and new monetary policies of governments.

Most theorists hold that fluctuations in outstanding bank loans do not *cause* variations in the price level, but that fluctuations in bank loans *result* from variations both in the demand for goods and in the prices of them. In other words, they believe that bank loans rise because an increase in the market demand for goods brings about an increase in the demand for purchasing power in the form of bank loans. They also think that, in most cases, outstanding bank credit declines as a result of a decline both in the market demand for goods and in the prices of them.

In the writer's opinion, the most serious weakness of the money and credit theories of business cycles is that their advocates ignore entirely those changes in the market demand for goods due to variations in profit opportunities in business in general. New profit opportunities have been created by the bringing into play of various industrial development forces. In order to take advantage of these profit opportunities, the activities of businessmen have frequently brought about general industrial expansion movements, which have resulted in a great expansion of demand for capital and other producers' goods. Such movements have usually been attended by expansion of bank credit and rising prices. At other times, profit opportunities have been curtailed greatly as a result of a relative overdevelopment of the consumers' goods industries and a relative shortage of consumers' purchasing power. When such conditions occurred, industrial expansion stopped, and the market demand for new capital equipment and other producers' goods declined greatly. Such price changes did not result from variations in the total quantity of purchasing power in

circulation; they resulted from changes in the business demand for goods brought about by changes in prospective profit margins.

Not all fluctuations in the price level, then, are due to unwarranted variations in the quantity of money and credit in circulation. For this reason, it is not believed that it would be possible for the government to stabilize the price level for any considerable period of time by attempting to regulate the quantity of purchasing power in circulation. Even if it were conceded that, through an effective policy of control over the expansion of bank credit, the government could keep prices from rising during an industrial expansion period, it does not follow that the government could keep prices from falling during periods of readjustment. A relative overexpansion of the consumers' goods industries may occur without being preceded by an inflationary boom. When such a situation does develop, there will be a decline in the demand for producers' goods. Production will also decline and prices, in the opinion of the writer, will fall.

The defenders of the money and credit theories may claim that, in a case of decline in sales, production, and prices, the government would be able to restore "normal" business conditions, as well as "normal" prices, by increasing the quantity of purchasing power in circulation. If it be granted that the price level could again be raised temporarily by means of a decrease in the gold value of the dollar or by means of the issuance of paper currency, "normal" business and industrial conditions could not be restored thereby. The overdevelopment of the consumers' goods industries and the inadequacy of consumers' purchasing power would still exist. For this reason sales, production, and prices would soon decline again. In brief, an economic disequilibrium in industry and business cannot be cured by manipulating the price level.

SECTION 3**CAPITAL DEMAND AND UNEQUAL DISTRIBUTION THEORIES****A. FLUCTUATIONS IN DEMAND FOR CAPITAL GOODS**

Several writers have explained business cycles in terms of fluctuations in the market demand for capital and other producers' goods. They believe that all peacetime upswings in business and industry are due primarily to a general rise in the market demand for such goods, and that all downswings are due to a general decline in the market demand for them. According to this group of theorists, then, the causes of business cycles consist of the forces and factors responsible for fluctuations in the market demand for this class of goods. There is reasonable agreement among them as to what factors play a part in producing the variations in this demand, but considerable difference of opinion exists as to the relative importance of each causal factor.

For the following reasons the theorists of this school claim that upswings in the trend of business are brought about by a rise in the demand for capital and other producers' goods:

'A rise in the demand for this class of goods results in a general increase in both the volume of sales and the volume of production, as well as in prices. An increase in employment and in the national income follows the higher prices and greater production. During the early stages of the upward movement, consumers' money incomes rise faster than the physical volume of production of consumers' goods. For this reason, consumers' demand is strong enough to sustain rising prices for such goods. The strong consumers' demand causes further expansion of industry, and, through the use of bank credit, the upswing in business develops into a boom.'

All agree that the increased market demand for capital and other producers' goods is attended by a much larger

volume of investments in new capital equipment, as well as by greater opportunities to make profits from new industrial investments. A few appear to believe that the whole industrial expansion movement is initiated as a result of the accumulation of large surplus investment funds by investors. The industrial movement starts, they think, when investors decide that conditions are favorable for making new investments.

The majority of the theorists of this school, however, believe that great industrial expansion movements are initiated by the forces which create new and large profit opportunities in business. They hold that, in the past, the principal factors which created new profit opportunities were: (1) the opening of new territories for settlement, (2) the exploitation of newly discovered resources, (3) the development of new industries, and (4) the use of improved types of capital equipment and new processes of production in old industries. The author of this book has designated these factors as the industrial development forces. Many theorists believe that, when several of these development forces are simultaneously brought into play, there will be a great industrial expansion movement.

Probably all the theorists of this school would agree that the initiation of a large industrial expansion movement presupposes both the availability of a large quantity of investment funds and the existence of attractive opportunities to make profits from new industrial investments. Those who stress new profit opportunities as being the initiating cause of the movement tend to assume that, whenever such opportunities arise, sufficient investment funds will be found to take advantage of them.

It is probable that many industrial expansion movements in this country during the nineteenth century were retarded because of an inadequacy of accumulated savings and a shortage of available bank credit. But, at the present

time, there would be no shortage of investment funds (either from savings or from available bank credit) with which to take advantage of extensive new profit opportunities. It is believed, therefore, that the mere existence of large quantities of investment funds cannot of itself initiate an industrial expansion movement. Opportunities to make profits from new industrial developments must exist before the movement will be initiated by promoters and investors.

Several of this school of theorists do not look upon the industrial development forces as being innate characteristics of our economic system. They claim that the settlement of new territories, the invention of new machines, and the discovery of new resources are no more innate features of our exchange economy than are wars or trade treaties. These factors are special occurrences, and are outside the day-to-day operation of our economic system. In the opinion of the author of this book, it makes little difference whether these factors are called "innate" or "outside" forces, providing their actual influences on business fluctuations are correctly understood. How we classify wars or monetary and currency policies is of little importance, so long as we understand their consequences.

Most business-cycle theorists recognize that all industrial expansion movements will eventually result in a considerable increase in the productive capacity of the consumers' goods industries. Most of them admit that, in the due course of time, this expansion of productive capacity will be followed by a rapid rise in the output of finished consumers' goods. They also admit that, when this occurs, the rate of increase in consumers' purchasing power will be surpassed by the rate of increase in the output of consumers' goods. Such a development, they say, results in a relative overproduction in the consumers' goods industries, causing the industrial expansion movement to come to an end. In other words, they point out that the expansion movement stops because

it is no longer profitable to expand further the consumers' goods industries.

There is a fairly general agreement among capital-demand theorists that industrial expansion movements are stimulated both by bank credit expansion and by the lag of wages behind the rise in prices and profits. New bank credit is used to increase the market demand for goods, while the lag of wages behind prices is one of the main reasons why profits rise rapidly. Production, then, is stimulated greatly as a result of mounting profits.

Most of these theorists also agree that both these factors frequently play an important role in bringing booms to an end. Surplus reserve bank credit is often exhausted during booms and, when it stops expanding, the booms stop growing. The wage lag during uptrends is one of the factors which prevents consumers' purchasing power from increasing rapidly enough to assimilate the mounting volume of production of consumers' goods. The theories of the following writers may be classed as capital-demand theories: Tougan-Baranowsky,¹ Spiethoff,² Cassel,³ and Robertson.⁴

The origin of peacetime boom cycles is fairly satisfactorily explained by the capital-demand theories. They do not, of course, account for war booms or for inflationary booms generated by monetary and currency policies of governments. Nor does this class of theories explain the origin of overinvestment-underconsumption cycles. The period of business prosperity preceding the depression of the latter type of cycle may not be one of rising prices or of bank credit expansion. The causes of the depression in this type of cycle are the causes which produce the cycle. Industrial, business, and economic

¹ M. Tougan-Baranowsky, *Les Crises industrielles en Angleterre*.

² Arthur Spiethoff, "Vorbemerkungen zu einer Theorie der Überproduktion," *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*.

³ Gustav Cassel, *The Theory of Social Economy*.

⁴ D. H. Robertson, *A Study of Industrial Fluctuations; Banking Policy and the Price Level*.

developments preceding the depression must be analyzed in order to discover its causes. The unequal-distribution theories of cycles are the only ones which attempt to account for nonboom depressions. Let us examine the nature of the unequal distribution theories.

B. UNEQUAL DISTRIBUTION OF INCOMES

Some writers believe that the inequalities in the distribution of the money income (the proceeds from the net production of industry) account for major fluctuations in industry and business. Over a period of several years—say ten—they tell us that the concentration of a large portion of the national money income in the hands of a few very rich individuals results in a relative surplus of investment funds and a relative shortage of consumers' purchasing power. It is assumed that this will be true, because the large-income receivers and savers, through investments, will develop the productive capacity of industry to a point where the output of consumers' goods outruns the growth in the purchasing power of the mass of consumers. They claim, therefore, that industry and business alternate between periods of industrial expansion and business depression, because of this lack of balance between the saving and the spending of the money income.

Some of them assume that, in the course of time, booms and periods of business prosperity follow periods of recovery from former depressions. At the beginning of recovery periods in industry, they claim, there is a fair degree of balance between current production and consumers' purchasing power. It is thought that a temporary balance is established during the previous depression and recovery periods, at which time, in spite of the small volume of production, savers accumulate large surplus investment funds. The productive investments of these surplus savings are said to initiate periods of industrial expansion which fre-

quently develop into booms. Some of these theorists recognize that boom movements are facilitated by rising prices and the expansion of bank credit.

According to the position of most of the theorists of this class, the forces which play the most important roles in causing the cumulation and termination of booms and periods of business prosperity are: first, an increase in employment, and, second, a lag of wage rates behind prices and profits. With reference to these factors, they reason as follows: An increase in employment causes consumers' purchasing power temporarily to rise fast enough to sustain the market demand for the available supply of consumers' goods. The wage lag behind prices causes a rapid increase in profits which, in turn, stimulates both savings and production. But, in relation to the total volume of production, the wage lag further reduces the purchasing power of consumers. When the increased output of finished consumers' goods resulting from the industrial expansion movement begins to flow into the markets, a surplus supply of those goods is soon accumulated. Industrial expansion then stops, and a depression follows.

These theorists claim that, under a state of fairly equal distribution of income, the pressure of growing human needs for satisfaction will maintain a correct adjustment between the effective demand for consumers' goods and the accumulation of capital, or between saving and spending. They also affirm that, under the present unequal system of income distribution, "a large part of the surplus unearned income of the rich is found to be excessive, even for the purposes of luxurious and wasteful consumption, and accumulates automatically to form an investment fund of capital which is larger than is required to help maintain the growing volume of consumption in the economic world."¹

¹ J. A. Hobson, *Economics of Unemployment*, p. 8.

It is said that an excessive capacity of production of industry and a deficiency in consumers' purchasing power, even in "good" times, is evidenced by large and unsound foreign loans, by keen international competition for foreign markets, by restrictions upon output, and by idle plants. The claim is also made that the growing amount of unemployment is due as much to the limited markets for products as to the displacement of laborers by automatic machinery. In the opinion of these theorists, excessive capital investments are not checked by falling interest rates. They hold that the surplus incomes of the rich will be invested regardless of interest rates. Because the monopolistic industries hold up prices in the face of increasing stocks of goods, they assert that the oversupply of consumers' goods cannot be eliminated through reduction of prices.

The genesis of the unequal-distribution theories of cycles—or rather of depressions—reaches back almost to the days of Adam Smith. Such an explanation of business fluctuations was first suggested by Lauderdale. It was vigorously defended by Malthus and Sismondi following the close of the Napoleonic Wars. Then the socialists, Rodbertus and Karl Marx, accepted this explanation of the phenomenon as evidence of a fundamental defect in the capitalist system. In their modern form, unequal-distribution theories are accepted, in whole or in part, by many students of cyclical fluctuations. The most notable exponents of modern unequal-distribution theories are Hobson,¹ Foster and Catchings,² Bouniatian,³ and Keynes.⁴

In the opinion of the author of this book, the unequal-distribution theories do not adequately explain the origin of boom movements. On the other hand, he believes that they do account for noninflationary periods of business pros-

¹ J. A. Hobson, *Economics of Unemployment*.

² W. T. Foster and Waddill Catchings, *Profits*.

³ Mintor Bouniatian, *Dépression, progrès, technique et dévaluation*.

⁴ J. M. Keynes, *The General Theory of Employment; Interest and Money*.

perity, and that they also explain why periods of business prosperity terminate in depressions. The reason why the unequal-distribution explanation of cycles gained so little support from nonsocialist students prior to 1907 was that, up to that time, the principal industrial nations continued to go through periodic industrial development movements. Largely as a result of this continued industrial development, in spite of the growing inequality in the distribution of the national money income and in face of the rapid increase in savings, there were few surplus investment funds. But as soon as the industrial systems of the leading nations reached a fairly mature and balanced stage of development, surplus investment funds and excess capacity of production appeared as serious problems. The shortage of consumers' purchasing power then became more evident in this country, as well as in others.

In the meantime, if the government does not interfere with the operation of our economic system, the majority of the business fluctuations of the future will probably take the form of nonboom depressions (overinvestment-underconsumption cycles) rather than that of inflationary booms. This will be true because of the definite, and more or less permanent, existence of a relative shortage of consumers' purchasing power, or because of the existence of an excess capacity of production in the consumers' goods industries. The surplus savings and the shortage of consumers' purchasing power are likely to retard economic progress in the future. Relative to the capacity of production, consumers' purchasing power is now so limited that rapid progress in the expansion of production will be improbable, if not impossible. If the great unequal distribution of the national money income continues, it is probable that many depressions will occur in the future. But it is not probable that there will be booms, except those generated by wars and artificial price inflationary policies of governments.

CHAPTER XII

FORECASTING BUSINESS CONDITIONS

SECTION 1

EMPIRICAL BASIS FOR FORECASTING

If the operation of our industrial system should be definitely stabilized, there would be no cause for anyone's being concerned over the future trend of business. The ups and downs in the business trend, of course, give rise to the problems of business forecasting. So long as it is fairly certain that in time the current trend of business will change, all businessmen are interested in knowing what the nature of those changes will be, and when they are likely to occur. Business forecasters attempt to supply this information by predicting the future trend of business.

If fluctuations in the trend of business always followed a definite and unchanging pattern, accurate forecasting of future conditions would be a comparatively simple task. If the trend conformed definitely to a standard pattern of cyclical changes, with a given number of phases of fixed amplitude and duration, the immediate future trend could be ascertained simply by locating the present position of business on the standard pattern chart. Unfortunately, however, actual fluctuations in the trend of business do not follow any such standard pattern. There are, moreover, great irregularities in the fluctuations of the actual business trend.

Notwithstanding these great irregularities in the trend, reasonably accurate forecasting of future business conditions is not theoretically impossible. Future business conditions grow largely out of past and present industrial and business conditions. One's ability to predict the business trend

depends upon the thoroughness of his knowledge and understanding of what has happened, and of what is happening, in the business and industrial world. To predict the consequences of present economic activities, it is necessary (1) to know the intensity and magnitude of the present significant economic activities, (2) to understand the interrelationships of these significant activities, and (3) to foresee the results or consequences produced by them. In addition to the above knowledge of the current operation of the various economic forces, moreover, it would be necessary for a forecaster to know in advance the important economic occurrences (such as wars), as well as impending changes in governmental policies toward business, in order to make an accurate forecast of future business conditions.

In spite of the almost insurmountable difficulties in the way of accurate business forecasting, there are bases for making practical forecasts of the future trend. The first basis for forecasting might be called the "empirical" method. Through it one seeks to read the future by the light of the past. This process of forecasting is frequently called the historical method. The second basis for forecasting is the analytical method, or reasoning from specific cause to effect. This method is frequently designated as the "cross-cut" analysis procedure. It emphasizes changes in business and industrial forces and factors, and takes into consideration new situations and conditions. In making a practical forecast, neither of these two methods should be used to the exclusion of the other, but information gained from the first should be supplemented with facts and conclusions drawn from the second.

The remainder of this section will be devoted to a discussion of the empirical or historical basis for forecasting. It was pointed out in previous chapters of this book that there have been similarities, as well as many differences, between various business cycles of the past. These similarities,

together with the characteristics common to the different phases of business cycles, may (with certain precautions) be used as one of the bases for forecasting the future trend of business. Let us examine the technique of forecasting on this basis.

Once it is recognized that a boom is in progress, most students of business cycles would predict a future recession of a depression nature. When a depression occurs, it is usually safe to conclude that a recovery will follow. But, in case of a boom, it is not easy to determine just when the recession will begin. Nor is it a simple matter during a depression to predict the starting time of the forthcoming recovery. Usually, it is most difficult to predict the beginning of a boom; and when one starts it is not easy to foretell its intensity.

In addition to frequent regularity in the succession of the different phases of inflationary boom cycles, there are other similarities which may give some basis for forecasting the future trend of business. All the business and industrial factors measured by time series are interrelated one to another. Historically, many of them, either with or without a time lag, have had a fairly close statistical correlation. For example, prior to the World War an increase in bank reserves was usually followed, within a few months, by a rise in security prices. A rise in security prices, in turn was frequently followed by a rise in commodity prices. Prior to 1914, boom conditions would eventually exhaust surplus bank credit and bring the boom to a close. A rise in interest rates and a tightening of the money market brought about a fall in security prices, which, in most cases, was followed by a decline in commodity prices. Historical correlations of the movements of many other statistical series during past business fluctuations have been observed and measured. Most of these historical correlations have been used as a basis for forecasting purposes.

Some of the business-forecasting agencies or services have based their forecasts largely upon an assumed regularity in the sequences of the various phases of business cycles. Others have employed, as a basis for their forecasts, the historical correlation of the fluctuating movements of different time series. A few of these agencies use both bases in making their predictions. As a matter of fact, all the purely statistical forecasting services make their forecasts entirely upon one or the other or upon both of these bases. To such agencies business forecasting is little more than a statistical problem of discovering future business trends through quantitative knowledge of past trends. All statistical forecast charts are predicated upon the theory that business history will repeat itself, either as to fluctuations in the general trend of business, or as to correlations in the fluctuations of certain time series.

For many years the Babson Statistical Organization published a business forecast chart known as the "Babsonchart." It was based upon what was called "the equal action and reaction" theory, which holds that every general business trend is opposed by an equal reverse general trend. According to the theory of this chart every period of supernormal business activity must be followed by an equal period (in area) of subnormal activity. The chart had a trend line of theoretically normal business activity. Around this "normal" trend line fluctuated the trend line which supposedly represented actual business activity. The theory of the chart was that, when business is supernormal, the area between these two trend lines (the "normal" and the "actual"), over a long period of time, is the same as the area between them when business is subnormal. Forecasts of future business conditions, then, were made on the basis of the recent past and present subnormal or supernormal conditions as indicated by the chart. It is not believed that the chart had great practical value.

From the standpoint of the statistical methods employed in making it, many objections might be raised concerning the Babsonchart. For example, as pointed out in Chapter IV, except for some kind of statistical average, there is no statistical method by which "normal" business conditions can be determined. In the Babsonchart the time series of debits to individual accounts was used to represent the "normal" trend of business. The figures of this series, of course, go up and down in magnitude with the cyclical fluctuations in the general trend of business. For this reason the series could not represent an unfluctuating normal business trend. The line of the chart purporting to represent the actual fluctuating trend of business was a composite index, made by combining the indices of several time series. Before combining these series into the composite, each one was thrown into a special scale figure which was supposed to indicate magnitude above or below "normal." The base used for each of these figures was an "average."

If it were possible to determine the normal trend of business during any period of the past, and at the same time to determine the exact extent to which the actual trend of business at all times during that period fluctuated above and below "normal," such a chart would not necessarily forecast the future trend of business. This statement would be true because: (1) the "normal" trend of business may not be the same in the future as it was in the past; (2) new economic forces brought into play, and changes in the relationships of other forces, may cause business as a whole to fluctuate very differently in the future.

The Harvard Economic Service was launched soon after the World War. Its forecast method was based upon the assumption that the sequences of business events which occurred in the past would persist in the near future. Sequences of events chosen by this forecast service were the relationships between the movements of time series repre-

senting (1) money and bank credit conditions, (2) speculation, and (3) business conditions. A composite graph representing each of these three factors was constructed from available data for a considerable period of the past. A chart was made by plotting the trend of each of these three graphs. The forecasts chart, then, consisted of three graphic curves representing speculation, banking, and business, respectively.

A rise or fall in the curve representing speculation was supposed to forecast a similar movement of the curve representing business. Behavior of the speculation curve was supposed to be doubly significant if accompanied by an opposite movement of the curve representing the money market. When the movements of these two curves were opposite, then, a fundamental change in business was supposed to be indicated. A rise of the speculation curve and a fall in the money-market curve were said to indicate an improvement in business. But a fall in the former and a rise in the latter supposedly indicated an impending decline in business.

Little or no criticism could be made of the Harvard Economic Service forecast chart from the statistical standpoint. It was constructed by able statisticians who used the most widely accepted statistical methods and technique in constructing it. The forecast chart, however, proved to have little or no practical value in forecasting future changes in the trend of business. Following the depression of 1929, issuance of the chart was discontinued.

Explanation of the failure of the Harvard forecast chart to forecast is to be found in the fact that the financial, business, and speculative activities represented by the time series used in making the graphs did not retain the same quantitative and time relationships in their movements that they formerly had evidenced. In short, the correlation of the movements of these time series changed with changes in the internal operation of our economic system. The fixed

relationships assumed to exist among them were upset by changes in industries, business customs, and business practices, as well as by changes in laws and in the distribution of the national income.

There are, of course, several business forecasting agencies other than the Babson and the Harvard services. Among the better known of these services are The Brookmire Economic Service, Moody's Investors' Service, and The Standard Trade and Securities Service. In making their forecasts, none of them, with the exception of The Brookmire Economic Service, has depended so largely upon empirical knowledge gained from statistical series of the recent past as did the Babson and Harvard services. The Brookmire forecast chart has been based upon the assumption of fixed sequences in certain time series, just as the Harvard chart was. All forecasting agencies have used assumptions of historical repetition of cyclical movements, as well as assumptions of fixed sequences of time series, to aid them in making forecasts. The forecasts of several of them, however, are made more upon specific analysis of current business conditions than upon either assumptions of historical analogy or assumptions of fixed sequences in different time series.

It is evident that the great weakness of the empirical or historical method of forecasting is the fact that business history does not repeat itself with sufficient regularity and similarity to make this method of forecasting reasonably dependable. The next section of this chapter will be devoted to a study of the principal forces which cause changes in the trend of business, and with the questions of how to interpret the consequences of the operation of these forces. This kind of study constitutes the basis for the analytical method of forecasting.

SECTION 2**MEASUREMENT OF BASIC TREND FACTORS**

The industrial balance is upset primarily by the forces which bring about a disequilibrium between the general market supply of goods and the general market demand for them. We have seen that, in the past, a rapid increase in the demand for capital equipment and other producers' goods has frequently resulted in initiating inflationary booms. A rapid decline in the demand for this same class of goods, on the other hand, always results in business depressions.

The failure of the current market demand for consumers' goods and services to keep an even pace with their volume of production also causes the trend of business to fluctuate upward or downward. When the demand for consumers' goods increases faster than current production of those goods (as it does during the early stage of a boom), the trend line of business rises. When the current production of this class of commodities increases faster than the market demand for them, a business recession results. The market demand for both producers' and consumers' goods must keep an even pace with their current production in order to maintain an industrial and business balance.

We have learned that, in the past, rapid upswings in the market demand for producers' goods were usually brought about by the development of attractive opportunities to make profits from the establishment of new enterprises, or by changes or expansion in old ones. In peace times these profitable opportunities were created by the opening up of new territories or resources to exploitation, the discovery of new types of goods, or the adoption of new methods of production. Government demand for goods during major wars have always resulted in a rapid rise in the demand for all kinds of producers' goods. Because of the fact that these rapid industrial expansion movements have been financed

to a great extent through bank credit, an increase in outstanding bank credit and a rise in prices have always attended them.

During the early stage of the inflationary booms of the past, a temporary market shortage of consumers' goods has developed. This has come about because consumers' purchasing power was temporarily increased faster than the current production of this class of goods. At such times, the rise in the market demand for consumers' goods is caused partly by the increase in the stocks of goods held by retailers and wholesalers. But the major factor in this market shortage is the fact that the current purchasing power of consumers immediately increases more rapidly than the current industrial output of consumers' goods. The rapid expansion of the output of producers' goods, and the rise in prices during the first stages of a boom, result in a rapid increase in consumers' purchasing power. At such times, a correspondingly rapid increase in the output of consumers' goods could not be made by our industrial system. Hence, a temporary shortage in the market supply of consumers' goods results. This shortage, however, does not last long.

Near the end of a boom, and just prior to the occurrence of a major business depression, stocks of goods in the hands of dealers are large, and there is a relative market surplus of industrial capacity to produce consumers' goods. This is true, because, over a long period of industrial expansion, the rise in consumers' purchasing power does not keep pace with the growth in industry's capacity to produce consumers' goods. This situation results from the fact that, during expansion periods, relatively too large a portion of the current output of industry consists of capital goods used for further production, and relatively too small a portion of it consists of finished consumers' goods. In the course of time, the additional production resulting from the excessive industrial expansion brings about a rapid increase in the productive

capacity of consumers' goods industries. The output of the consumers' goods industries then increases more rapidly than the growth in the purchasing power (income) of consumers.

When an excessive portion of the current national income and the new bank credit is invested in new capital goods, a surplus capacity of production develops in the consumers' goods industries. During inflationary booms a large part of the purchasing power invested in new capital goods is derived from an expansion of bank credit, and the remainder of it comes from savings made from the current national income. Regardless of the source from which the investment funds originally come, an excess capacity to produce consumers' goods develops when the physical expansion of industry is more rapid than the growth in consumers' purchasing power. When too large a portion of the current national income is saved and productively invested, and no new bank credit is used as investment funds, an excess capacity of production eventually results in the consumers' goods industries.

There is little or no need to expand productive enterprises when most of the existing ones are unable to operate at full capacity. Whenever it becomes unprofitable to expand further the consumers' goods industries, the market demand for new capital and for other producers' goods declines. Stoppage of industrial expansion not only causes a decline in the market demand for producers' goods of all kinds, but also brings about a general decline in prices and production. It signifies the beginning of a major depression. As a result of the decline in the volume of production and in prices, consumers' purchasing power then declines, bringing about a further decline in production.

Major depressions, we know, are cumulative in their downward trend. They start a contraction of outstanding bank credit which forces goods upon the markets at lower

prices. The falling prices and glutted markets bring about further reduction in the volume of production, which in turn further reduces employment and the income of consumers. Eventually, credit is liquidated and the surplus volume of goods in the markets is reduced. Prices stop falling and production is stabilized, or increased, in volume. The stage of recovery is then reached.

There are several factors, in addition to wars and the various industrial development forces, which may, and occasionally do, cause temporary upswings in the trend of business. Actual or threatened monetary or currency inflation results in a temporary rise in the price level and in the volume of production. As has been pointed out, a large peacetime public expenditure program, such as a public building program, raises prices temporarily and stimulate the volume of production and employment. A large favorable balance of trade financed through foreign loans, tends, while it lasts, to produce an uptrend in business. Actual or proposed foreign trade agreements or the raising of tariff rates may strengthen business confidence and cause some upswing in business.

In addition to a shortage of consumers' purchasing power, there are several factors which may help to halt an upswing in business, or which may contribute in bringing about a temporary downswing. A very unfavorable money and credit market is one of these factors. Business cannot continue to expand under a tight money market. Actual or threatened reductions in protective tariff rates retard immediate industrial expansion and may result in an actual decline in the trend of business. Such a change in tariff rates causes a decline in the prices of many commodities and thereby reduces the profits of many enterprises. Impending business regulatory policies frighten business promoters and retard immediate expansion of industry. Under certain conditions, regulatory legislation might bring about a decline

in the business trend. Serious labor difficulties, also, put a damper upon enthusiasm for industrial expansion.

Through available time series, the operation of most of the basic trend forces is subject to some quantitative measurement. A direct indication of changes in the demand for capital and other producers' goods can be gained from current statistics on the volume of building permits,¹ machine-tool orders, steel-sheets orders, and the volume of industrial production.² Indirect information on the trend of industrial expansion can be gained from statistical series on new corporations formed, new securities issued,³ and the amount of outstanding bank credit.⁴ It was pointed out in Chapter IV that there are no available statistics on the current volume of industrial savings, other than the figures on corporate surpluses, new securities issued, and time savings.

Figures on price changes⁵ are quite significant when interpreted in conjunction with information on the current volume of production, stocks of goods,⁶ and sales.⁷ Unless the price changes are brought about by deliberate price inflationary policies of the government, they indicate changes in the market demand for goods in relation to the available supply of them. There is frequently an uptrend in business without any rise in the price level, but there is seldom a noticeable downtrend without a general price decline. A general price decline attended by a fall in the volume of industrial production usually indicates a definite recession in business.

Reliable information on the current volume of sales is quite meager. The Federal Reserve Board formerly published an index on the volume of wholesale trade, which was

¹ See Table I, p. 278.

² See Chart I, p. 265.

³ See Table V, p. 283.

⁴ See Table II, p. 279.

⁵ See Chart V, p. 269.

⁶ See Chart IV, p. 268.

⁷ See Chart III, p. 267.

made up of sample figures from nine branches of the wholesale business. An index of department-store sales is published by the Department of Commerce, as already indicated. The weekly figures on debits to individual accounts¹ are generally accepted as indicative of the trend of the pecuniary volume of business. All these figures should be interpreted in conjunction with changes in the price level. Monthly figures on the pecuniary volume of imports and exports of goods are also published. Taken in conjunction with the volume of production figures, the various indices on the volume of sales throw much light upon the current trend of business. Volume of sales must, also, be interpreted in the light of available information in reference to stocks of goods on hand.

We have already learned that there is very little available information on the current distribution of the national income. The Bureau of Labor Statistics of the Department of Labor publishes indices on employment and payrolls,² which are made up of scant samples. There are no current indices on profits, rents, or interest payments. No index of the current income of farmers exists. Changes in the size of the total national income must be estimated from figures on the volume of production and sales and the general price index. The only time series that gives current information on the purchasing power of consumers is the index on department-store sales. It is said that the Bureau of Foreign and Domestic Commerce is at present developing an index on the volume of retail sales, which will be more general and useful than the present department-store sales index.

There is a serious need for reliable indices on the size and industrial and functional distribution of the national income for purposes of accurate business measurements and forecasting. While application of the National Social Security

¹ See Chart II, p. 266.

² See Chart XI, p. 275.

Act and the Agricultural Adjustment Act may result in making available much information on the distribution of the national income, it is not likely that adequate current indices on this subject will be developed in the near future. Information on income distribution would not be so badly needed if the various government agencies would develop dependable indices giving the following facts: (1) the capacity of production of consumers' goods industries, (2) the physical volume of production of those industries, (3) the stocks of consumers' finished goods in the hands of producers and dealers, and (4) the physical volume of retail sales.

These four index series, together with current figures on outstanding installment notes, would enable one to measure the current trend between growth of the consumers' goods industries and consumers' current purchasing power (income). The volume of retail sales, minus the increase in installment notes for any period of time, would be a fairly accurate measurement of the purchasing power (income) of all consumers for that period. The great mass of consumers spend all their money income currently; hence there can be no such occurrence as a consumers' strike in the general markets. When the above indices showed that the consumers' goods industries were expanding more rapidly than the purchasing power of consumers, a future industrial recession would be indicated. It is believed, however, that the productive capacity of the consumers' goods industries usually outstrips the growth in consumers' purchasing power long before there is any letup in general industrial expansion.

It was observed in a previous chapter that, historically, the amount of usable bank credit played an important part in determining the trend of business. Business declined when there was an exhaustion of reserve bank credit; it improved when there was an improvement in bank reserves. Today there is no such relationship existing between available bank

credit and the trend of business. There are three reasons for the slight connection between actual fluctuations in the amount of bank reserves and the trend of business at present. They are: (1) our banking system now possesses an excess amount of banking facilities; (2) business enterprises themselves furnish a larger portion than formerly of the circulating capital funds needed; and (3) boom-generating forces are weaker today than ever before. Yet a few of the forecasting agencies still place great emphasis upon bank credit condition data as indicative of the future trend of business.

Many time series which formerly were useful aids in the measurement of the trend of business, and in forecasting the future trend, no longer have the same value. This fact will be pointed out in the following section, in connection with a discussion of practical business forecasting procedure. In this section the disturbing influence of governmental policies affecting business will also be discussed.

SECTION 3

PRACTICAL FORECASTING PROCEDURE

Sound knowledge of the history of cyclical fluctuations is a necessary prerequisite to intelligent forecasting of the future trend of business. An understanding of the business cycles of the past, moreover, should not be limited to the fluctuating trend of the various time series during those periods. On the contrary, it should include detailed knowledge of the business, industrial, and political conditions and movements which then prevailed. A thorough knowledge of past cycles can be gained only through an analytical study of the economic happenings and conditions which attended each cycle. The historical, analytical, and statistical facts and conclusions concerning occurrences during any past cyclical movement must be combined into a composite picture in order to secure a correct understanding of that cycle. Comparison of happenings and conditions during the different

cycles should not be made until all the pertinent facts concerning each cycle are well understood.

In so far as data are available, the fluctuating movements of all time series during each cyclical period should be studied. For purposes of discovering statistical correlations and similarities of fluctuation of the various time series, graphic representation of the movements of each should be compared with the graphs of all others. An analysis of the economic conditions which prevailed should then be made in order to determine whether the discovered correlations were due to cause and effect, to a common cause, or to coincidents and accidents. Even when past fluctuations of certain time series are thought to have been due to cause and effect or to a common cause, there is no assurance that those same correlations will persist in future fluctuations of those series. There are two principal reasons why past correlations between time series may be upset in the future: first, the methods of compiling a series may be changed; and second, the causal relationships existing among the economic activities represented by certain series may change.

Because of changes in the sources and character of sample figures assembled for a series, or because of changes in the statistical technique employed in arriving at its index, the series may fail to retain the same correlations with other indices that it formerly had. For this reason all technical changes made in the index numbers of various time series should be known, and the significance of the changes should be estimated by the statistician.

In order to obtain a clear understanding of the meaning of the figures of any time series, it is necessary that one should know whether the economic activity represented by it has changed in relation to other economic activities. It was pointed out in the previous section of this chapter that, as a result of the increase in savings and in banking facilities, the business significance of bank reserve figures has undergone

a change. It is probable that the figures of many series will not have the same economic meaning in the future that they had in the past. Certainly the figures showing changes in the volume of railroad traffic and those on the production of coal do not now have the same significance that they had before the World War.

As a basis for predicting the future trend of business, one should have a thorough knowledge of the economic and political problems and conditions then confronting the country. If a business cycle is in progress, one should know what particular phase of the cycle business is passing through. He should know how the basic conditions and problems differ from those which confronted business during corresponding phases of previous cycles. If no phase of a cycle is evident, the forecaster should know enough about current business and industrial conditions to be able to formulate an intelligent opinion as to whether there is likely to be an early upturn or downturn in the general business trend.

The present and future effects and influences of existing government policies on business and industry are important determinants of the general business outlook at any one time. One should be able to answer the following questions with reference to the existing policies of the government as they affect business: Which policies temporarily stimulate business activities? To what extent does each of these policies stimulate, and how long will its "boosting" effects last? Which of the government policies retard or hold back business activities? Just how much of a retarding influence does each of these policies exercise, and how long will these effects last?

It is possible, of course, for certain kinds of government policies to bring about a temporary uptrend in business; and it is equally possible for certain other kinds of government policies to occasion a temporary decline in business. It is necessary to have informed opinions with reference to the

business influences of all prevailing government policies, if one is to forecast the future business trend.

Frequently the enactment of new government policies with reference to business and industry influences the general trend of business. It is often necessary, therefore, to foretell the specific changes in the policies of the government in order to forecast the business trend. This is particularly true in case of a prospective shift in the power of political parties holding opposing views in the matter of *aiding* and *regulating* business. How will it effect business if the Democrats win the election? What will be the affects if the Republicans win? The business consequences of the election, of course, would depend upon the extent to which the policies of the government, with reference to business, would be changed as a result of control by one or the other of the major political parties.

Upon the basis of the above-suggested methods of practical forecasting, what would one predict with reference to the future trend of business in this country? The author ventures to make the following observations regarding the present business conditions (summer, 1936) and the outlook for the future.

From 1929 to 1933 the country suffered one of the most devastating business and industrial depressions ever experienced. This depression was largely caused by an oversaving-underconsumption situation, brought about largely by growing inequality in the distribution of the national income. The cumulative downward movement of the depression was in many respects similar to the downward movements of previous major depressions, the essential difference being its greater magnitude.

In March, 1933, the depression had not run its full course. Credit and financial readjustments were still in progress, and the price level was still declining as a result of the continued liquidation of stocks of goods. This situation prevailed

when the New Deal business-stimulation policies were applied in the spring of 1933. Large Federal funds were provided for unemployment relief through the FERA, the country was taken off the gold standard, and the Public Works and the Agricultural Adjustment acts were passed. Not least of all, the law providing for the setting up of the NRA was passed. These government measures reversed the trend of the general price level, and also stopped the liquidation of stocks of goods. How long the downward movement of the depression would have continued without these New Deal measures is a matter of conjecture.

It is known, however, that the New Deal business-stimulation policies brought about an improvement in business. This was evidenced by a rise in prices, trade, and production. The recovery was artificial in that it was not brought about by a market shortage of goods. This upturn in business was artificial, also, in that it was induced by the government's decreasing the value of the dollar and increasing the purchasing power of consumers through doles and public employment paid for out of public credit. Lastly, it was artificial in that it was facilitated by limitation of production and price-fixing schemes through the AAA and the NRA.

How long will the stimulating effects of these government policies last? Will business continue its upswing when these artificial stimuli are removed, or when they run their respective courses? We must be able to answer these questions in order to form sound conclusions with reference to the future trend of business.

The Roosevelt gold policy has already lost its stimulating effects. While the Supreme Court killed the NRA, many of the private agreements on output and prices promoted by it are apparently still in operation. Under the new law the AAA is still effective. Business is still being stimulated by the public works and unemployment expenditures, but this great stimulus may soon be removed. It is believed

that there will be a downswing in business if the "emergency" public expenditures are stopped and the budget is balanced.

There now exist some government policies that retard or discourage business. Such are the National Social Security Act, the tax measures of 1936, the Public Utilities Act, the Securities and Stock Exchange acts, and the unbalanced budget and mounting public debt. When put in operation, the social security legislation and the new tax measures will reduce business profits. The public utilities, the stock exchange, and the securities acts repressed business largely as a result of "fright" engendered by them, rather than because of any actual burden they imposed upon legitimate business. The "fright" has about disappeared. Just now the possibility of currency inflation is a retarding influence. The threat of inflation may become much stronger if the government stops borrowing and business declines.

There is now an impending national election. If the Democrats win, it is likely that there will be more business regulatory legislation than there would be if the Republicans win. The Democrats appear to have the better chances to win the election. It is probable, therefore, that there will be new business regulatory legislation in 1937. It is likely that the weekly hours of laborers in the major industries will be regulated, and that there will be new antitrust and anti-holding company legislation.

During the long years of the depression and the more than three years of artificial recovery, many industrial enterprises permitted their capital equipment to depreciate and much of it to become obsolete. There has been comparatively little new private building and construction since 1929. Orders for new equipment and building permits will probably increase in the next twelve months, if business does not decline in the meantime. In other words, there will be some improvements in the so-called heavy goods industries if there is no business slump to prevent the improvement.

Because of the relative overexpansion of most consumers' goods industries prior to 1929, it is not expected that a shortage of consumers' goods will cause a rapid and general expansion of industry in the near future. Nor does it appear probable that a large number of important new industries will soon be developed in this country. Doubtless many changes in the character of the capital equipment and in the technical processes used in the established industries will be made from day to day, but it is not expected that such innovations will greatly stimulate the general volume of production. These innovations, however, will probably cause improvements in the equipment manufacturing industries. In short, it does not look at present as if the industrial development forces which initiated booms in former days will again do so in the near future.

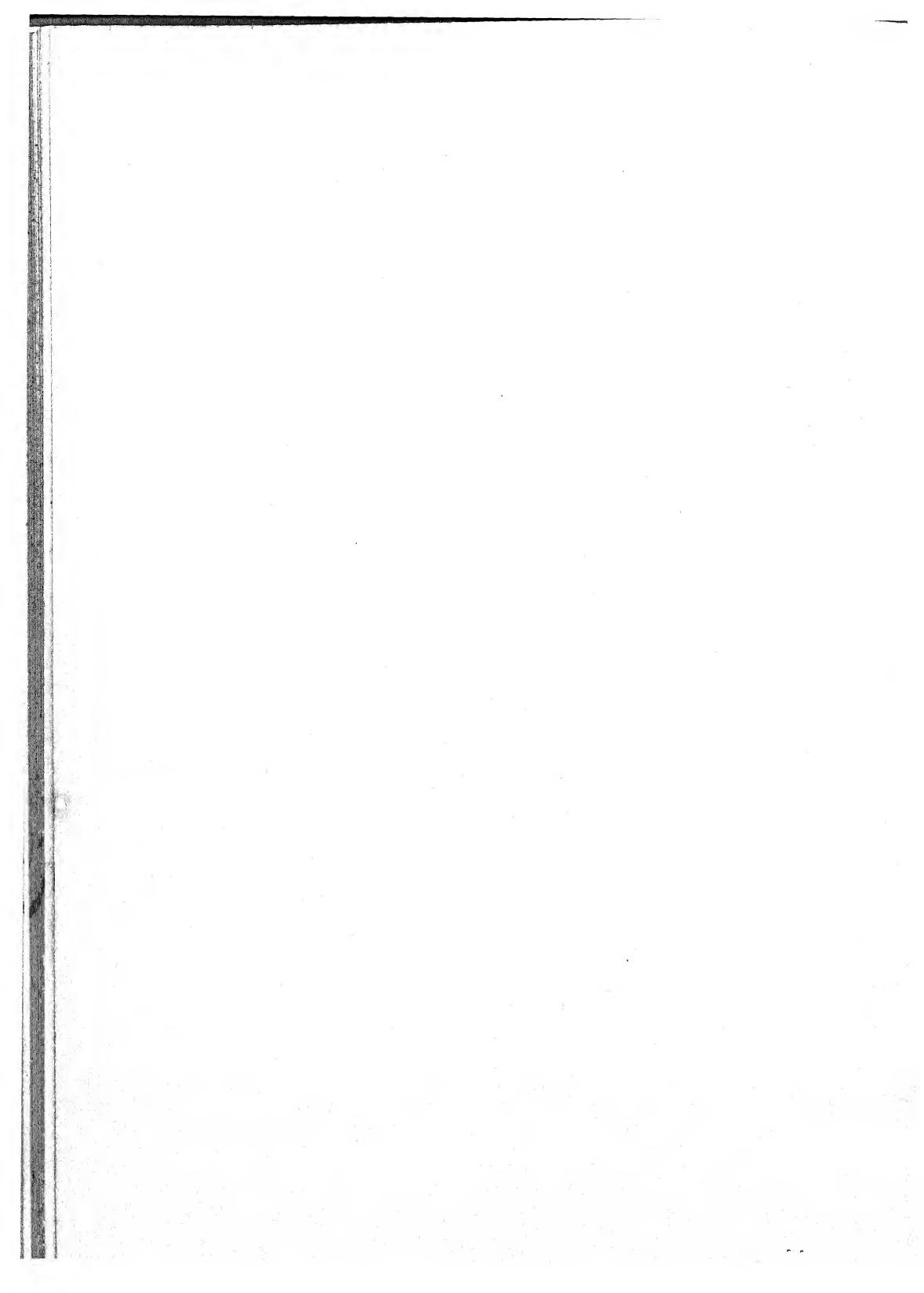
It is not believed that changes in the volume of our foreign trade will play a part in determining the trend of business for the next few years. This opinion is held because of the improbability that American investors will be willing to buy large amounts of foreign securities during the coming months. Without their heavy purchases of such securities, a large favorable balance of trade could not be financed.

Up to the present time, little real progress has been made in solving the problem of unequal distribution of income or the problem of overinvestment-underconsumption. As a result of the AAA program, the agricultural classes now get a larger portion of the national income than they did in the twenties. As a result of lower interest rates and debt adjustments, many small-income receivers have had their consumption purchasing power somewhat increased. But laborers are now receiving as wages no larger portion of the net product value of industry than they received in 1929. It is believed that when the government stops its great public expenditure program and balances its budget, a great shortage of consumers' purchasing power will result. The large

artificial consumers' purchasing power now being derived from government credit will be stopped when these expenditures are discontinued. Business, then, must readjust itself to a consumers' purchasing power derived wholly from incomes from private industry.

It is expected, therefore, that there will be an industrial and business slump when the government stops paying out large quantities of borrowed funds to small-income receivers. The nation will then be faced with a greater unemployment problem than it now has on its hands. Many of the old depression problems may reassert themselves in an intensified form.

When a new industrial slump occurs, will the nation turn to the policy of currency inflation to provide a temporary means of supporting the unemployed and stimulating business? Or, as a reform-relief measure, will the regulatory power of the government over private business be increased? It is not thought wise to forecast an answer to these questions at this time. In the meanwhile we have the drought relief expenditures, the WPA, and the soldiers' bonus payments to bolster up the demand for goods in the consumers' markets.



Appendix

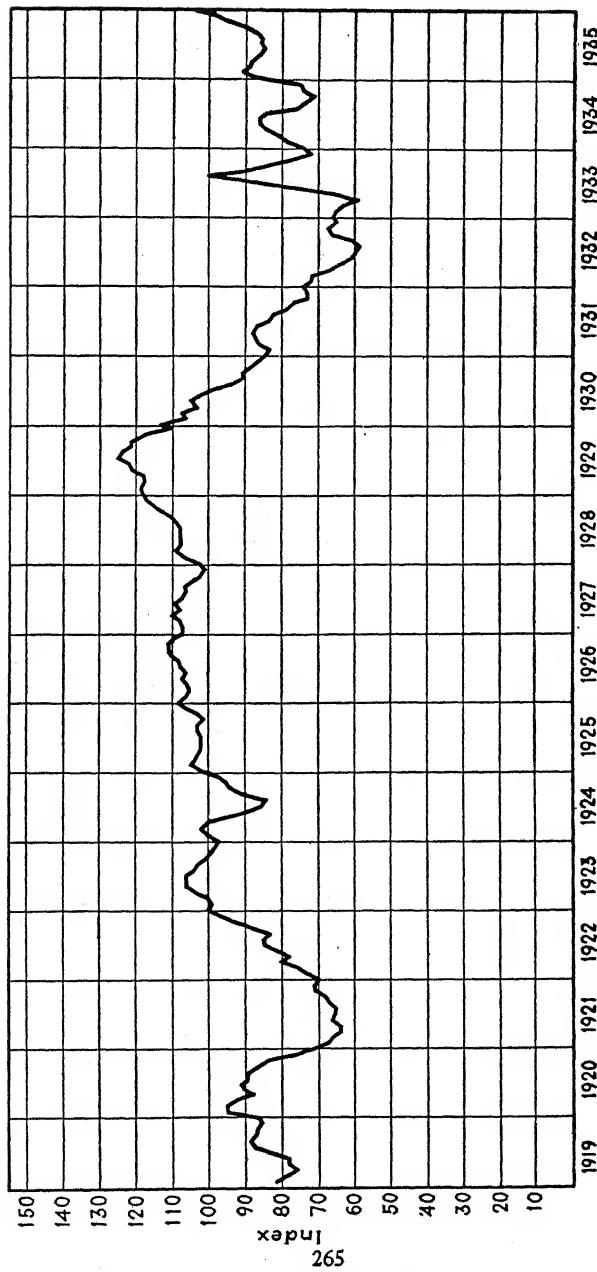


CHART I.—Index of industrial production.
Federal reserve index seasonally adjusted. 1923-1925 equals 100.

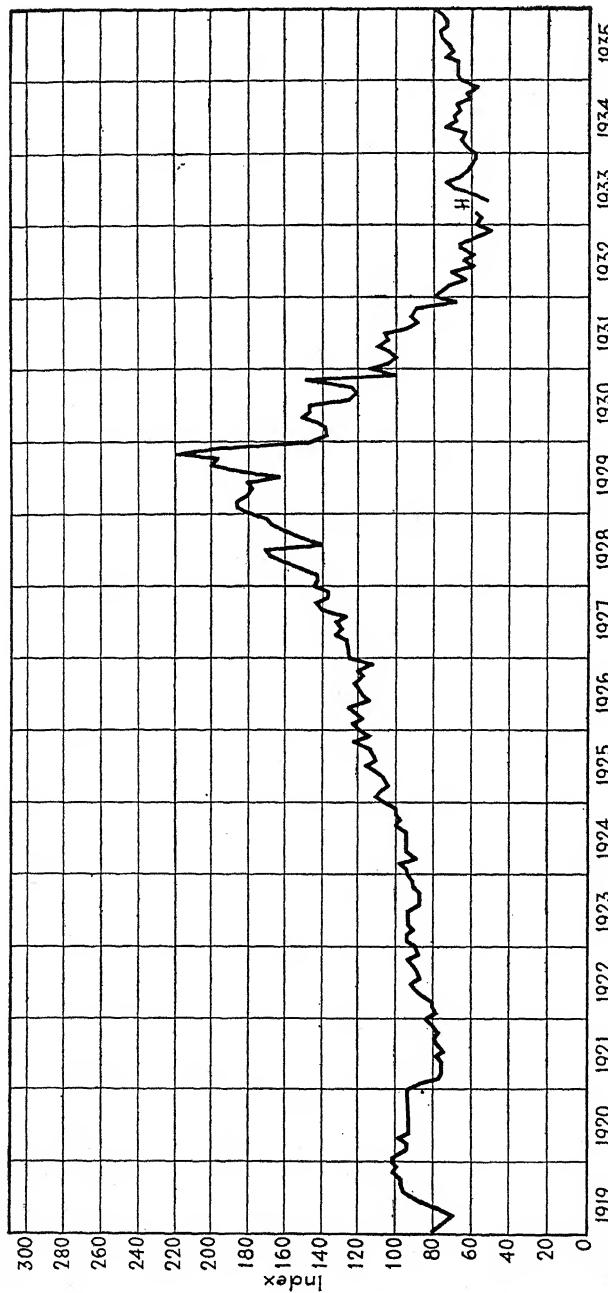


CHART II.—Index of debits to individual accounts.
Seasonally adjusted. 1923-1925 equals 100. H, bank holiday, March, 1933.

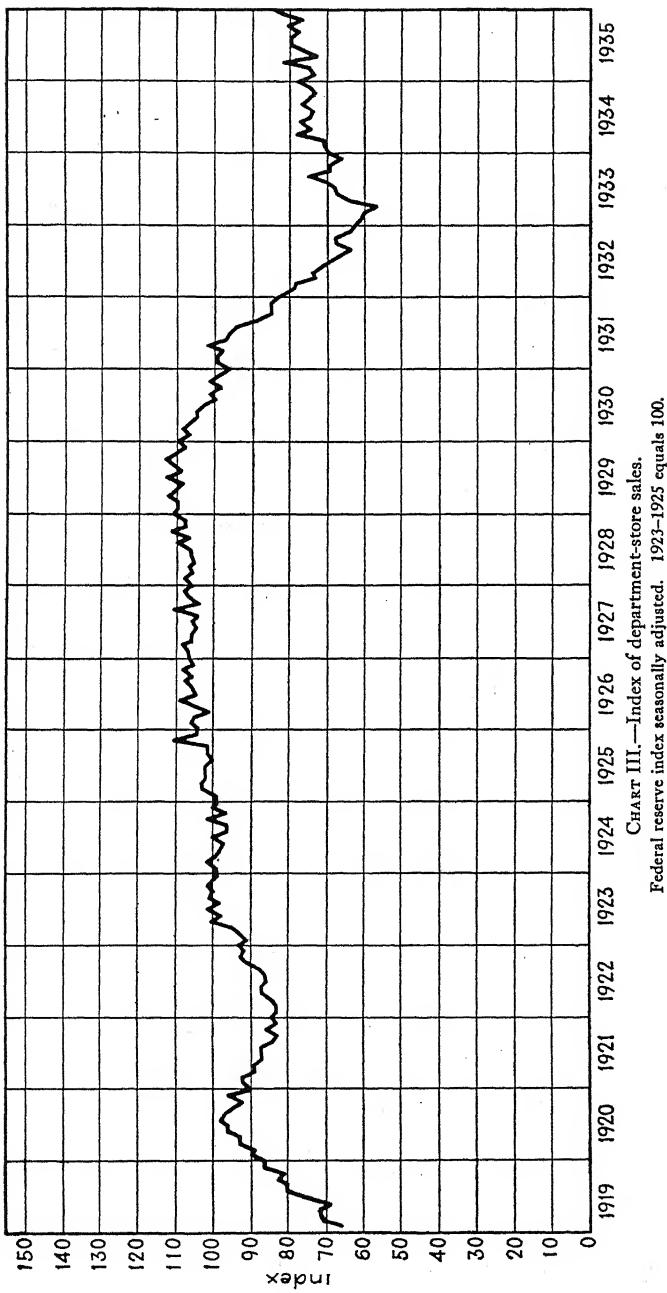
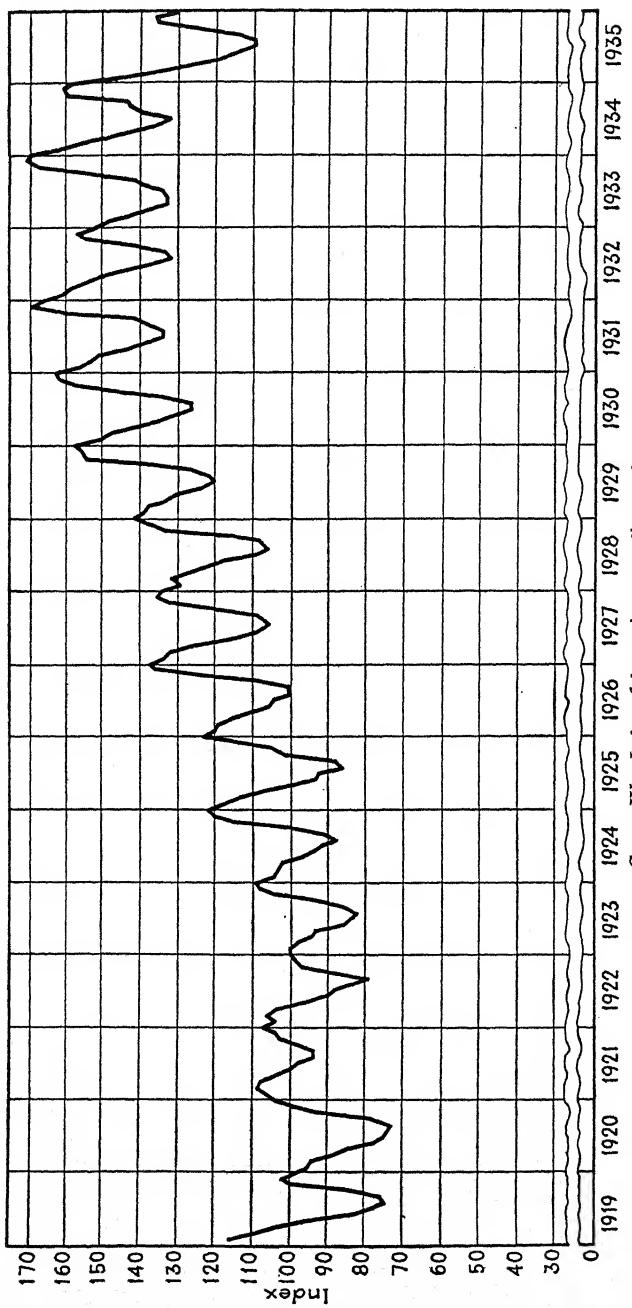
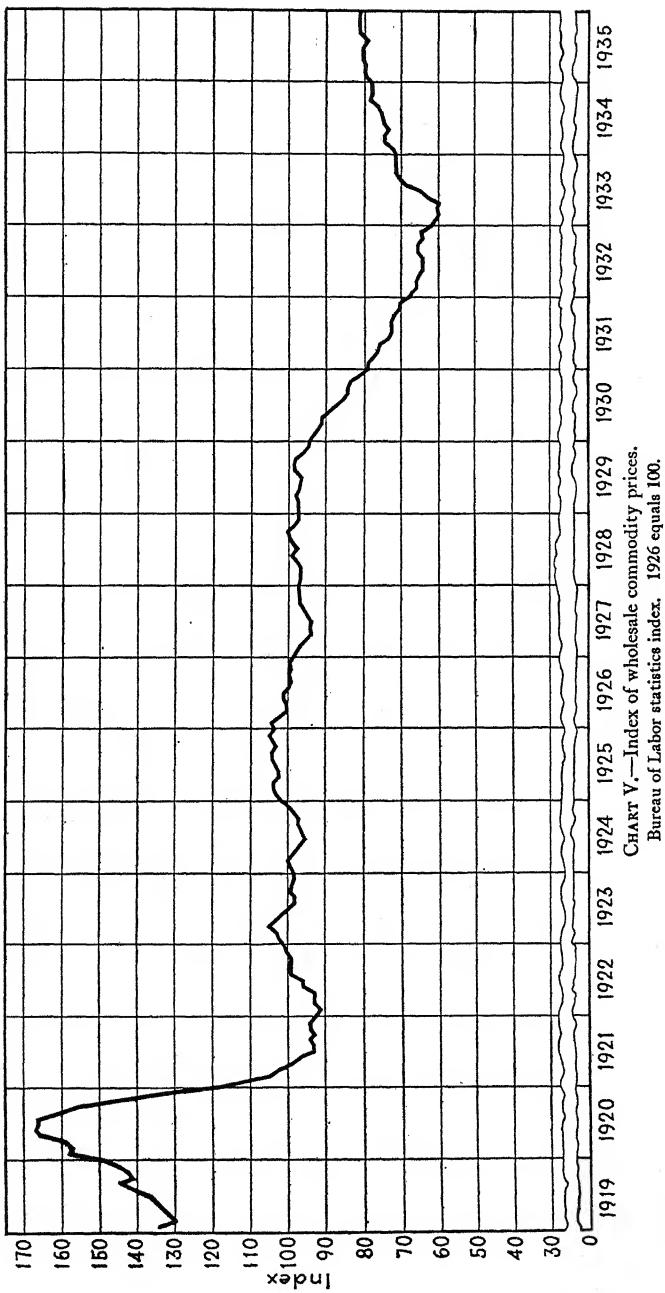


CHART III.—Index of department-store sales.
Federal reserve index seasonally adjusted. 1923-1925 equals 100.





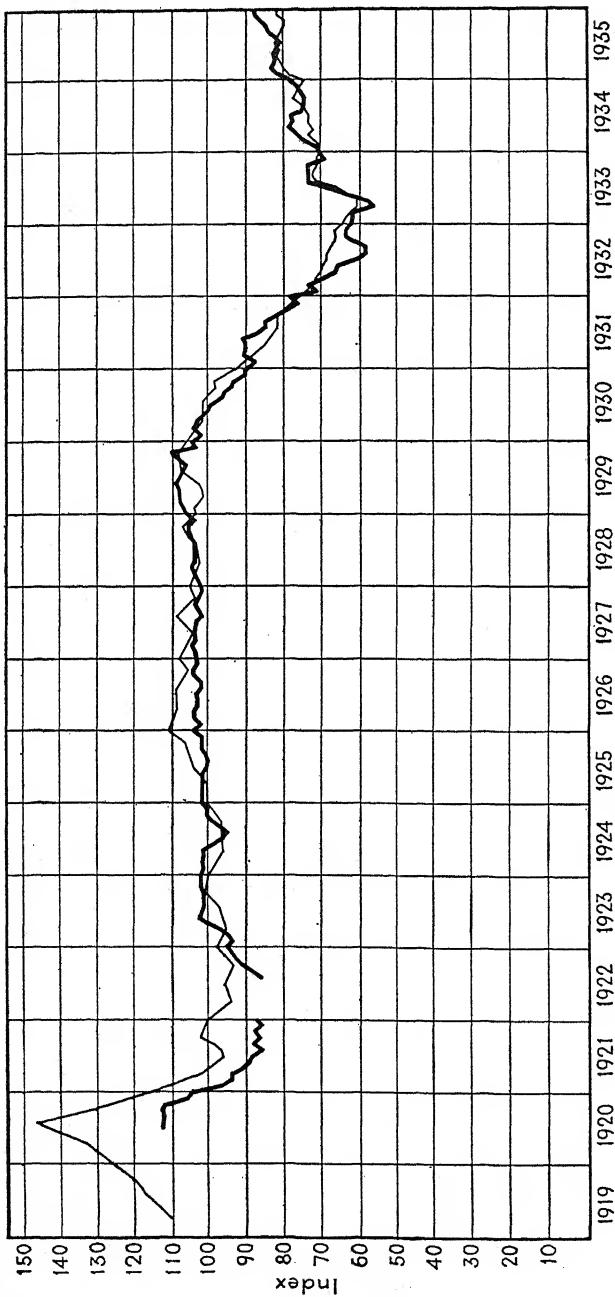


CHART VI.—Indices of retail food costs and average weekly earnings.

—, Bureau of Labor statistics index of retail food costs in 51 large cities combined. 1923-1925 equals 100.
—, index of average weekly earnings published by National Industrial Conference Board. 1923 equals 100.

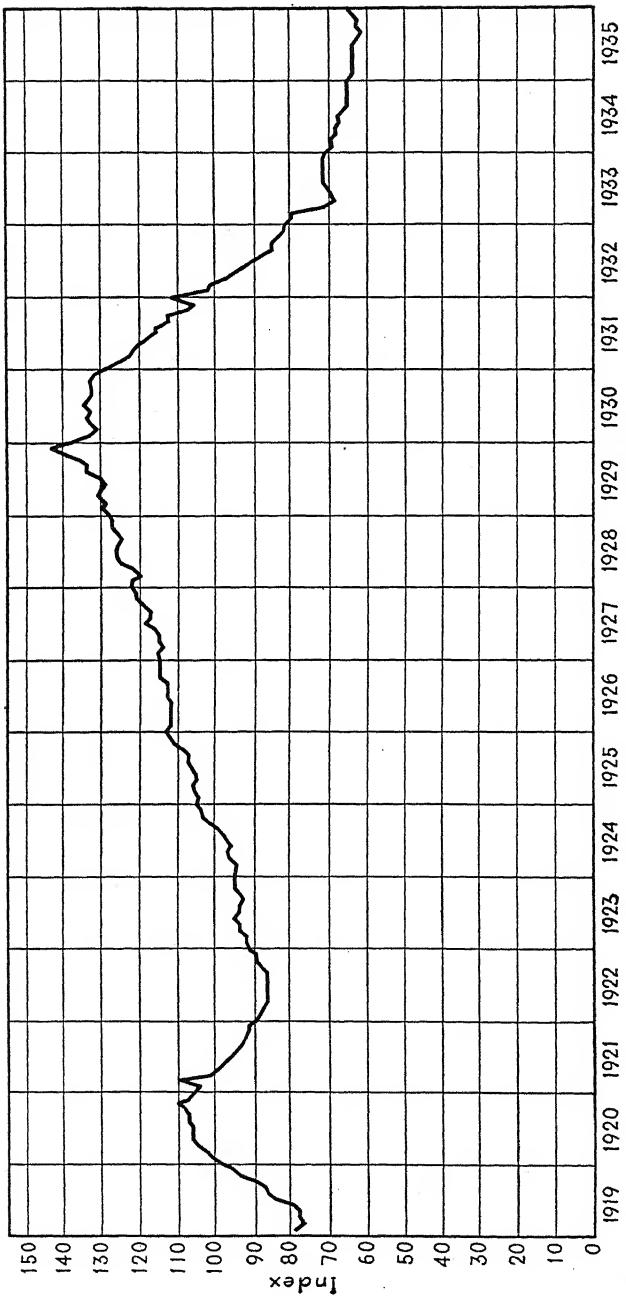
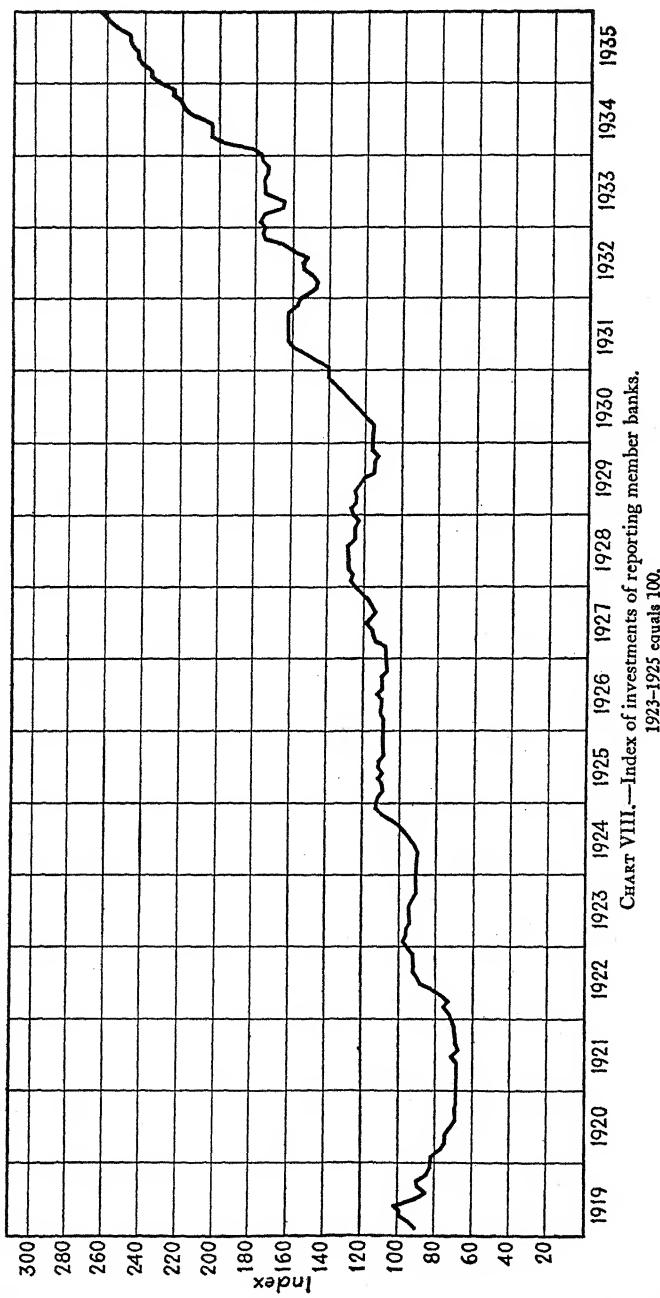


CHART VII.—Index of loans of reporting member banks.
1923-1925 equals 100.



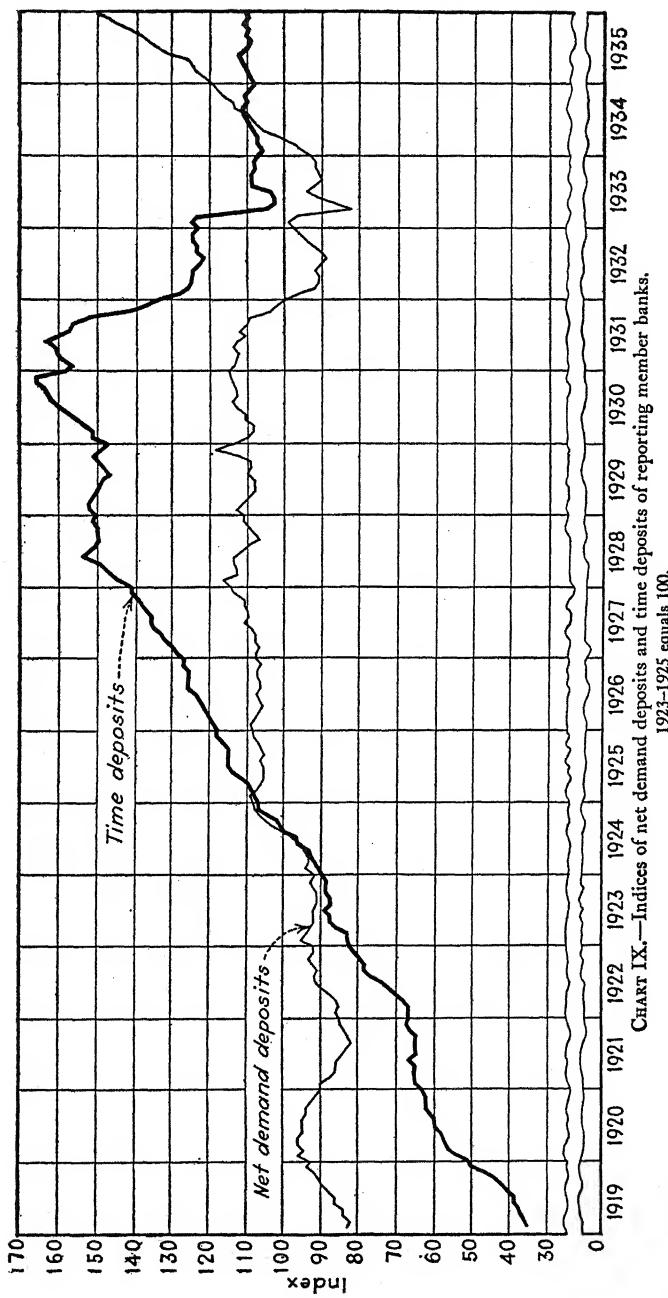
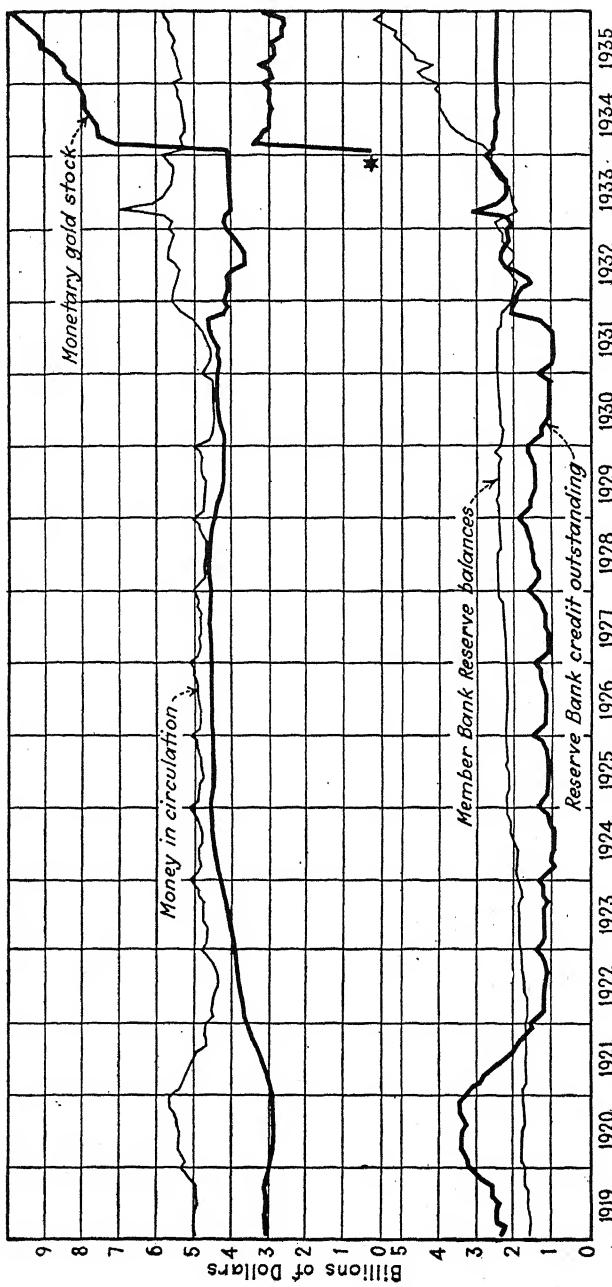
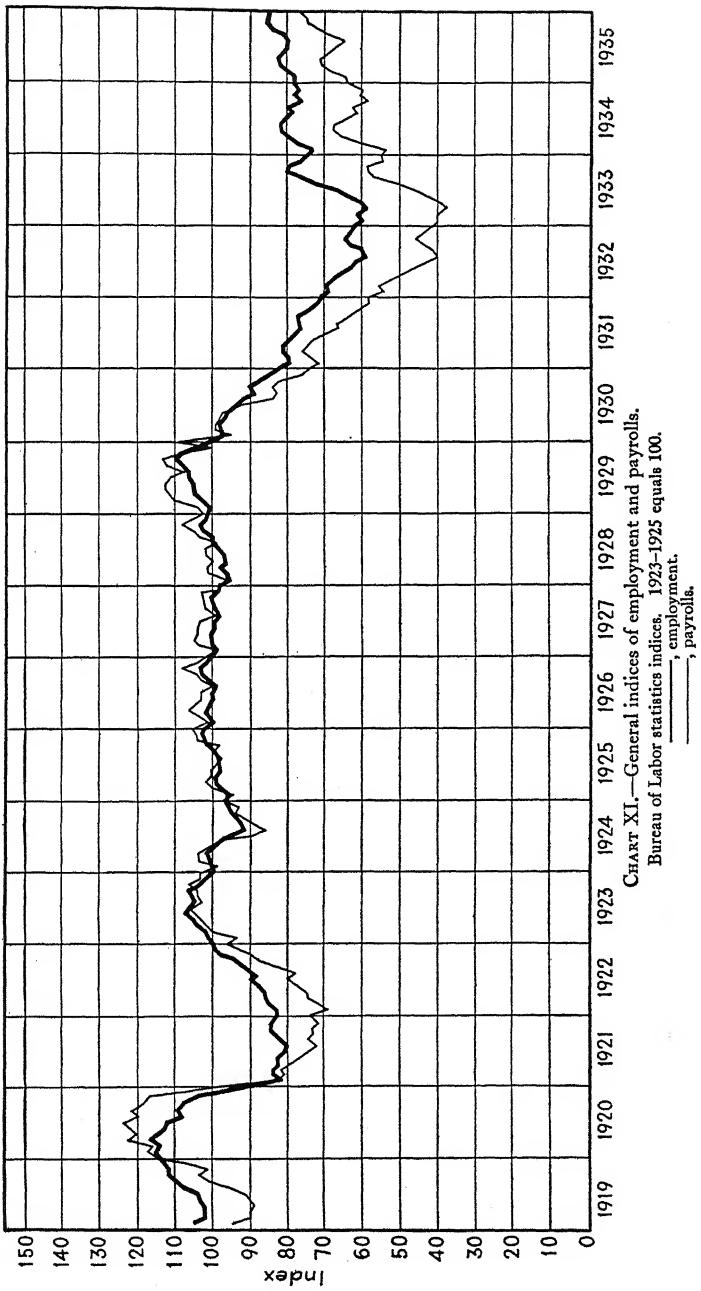


CHART IX.—Indices of net demand deposits and time deposits of reporting member banks.
1923-1925 equals 100.



* Treasury Cash and Deposits with Federal Reserve Banks did not exceed 450 million dollars during the years 1919-1933.

CHART X.—Federal reserve credit and related items.



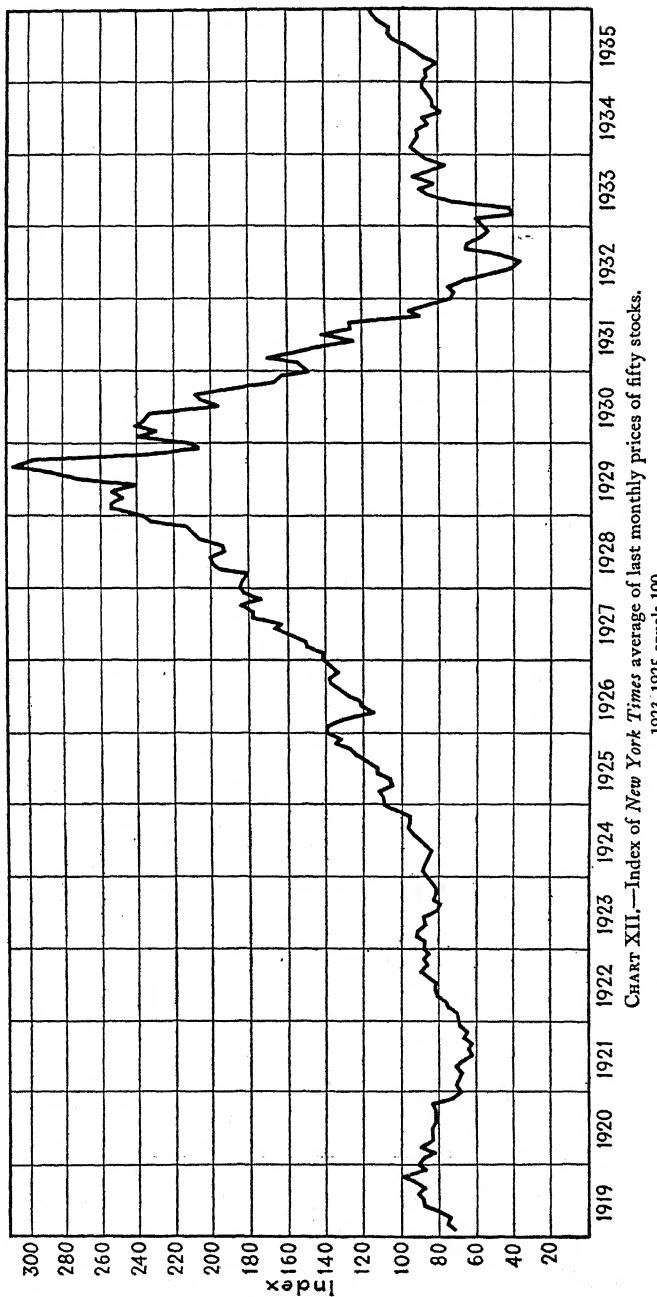


CHART XII.—Index of New York Times average of last monthly prices of fifty stocks,
1923-1925 equals 100.

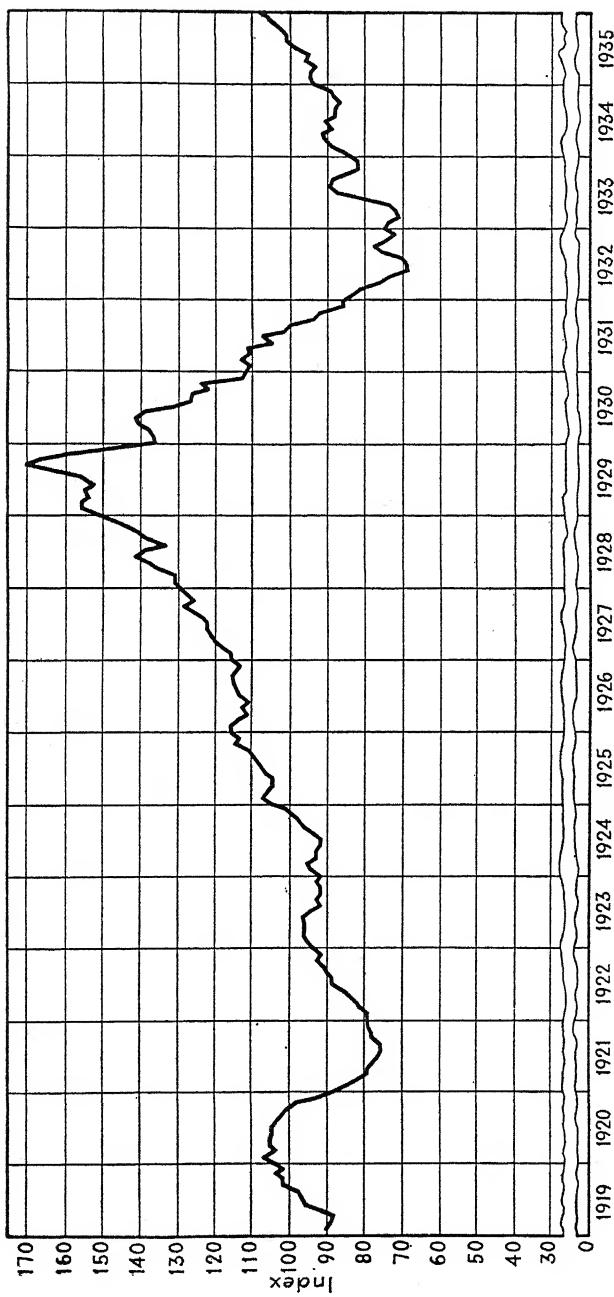


CHART XIII.—Index of business trend.
For a description of this index see pages 66-67.

TABLE I.—CONSTRUCTION CONTRACTS AWARDED

Year	Contracts awarded (millions) ¹			Index 1925 = 100 ¹		
	Residential	Non-residential	Total	Residential	Non-residential	Total
1919	\$ 849.2	\$1,730.7	\$2,579.9	36.0	64.5	51.2
1920	570.1	1,994.4	2,564.5	24.2	74.4	50.9
1921	878.7	1,476.5	2,355.2	37.2	55.1	46.7
1922	1,340.1	2,003.7	3,343.8	56.8	74.7	66.3
1923	1,583.9	1,919.8	3,503.7	67.1	71.6	69.5
1924	1,844.0	2,029.1	3,873.1	78.1	75.7	76.8
1925	2,747.7	3,258.7	6,006.4	100.0	100.0	100.0
1926	2,671.1	3,709.8	6,380.9	97.2	113.8	106.2
1927	2,573.3	3,729.8	6,303.1	93.7	114.5	104.9
1928	2,788.3	3,840.0	6,628.3	101.5	117.8	110.4
1929	1,915.7	3,835.1	5,750.8	69.7	117.7	95.7
1930	1,101.3	3,421.8	4,520.1	40.1	105.0	75.3
1931	811.4	2,281.4	3,092.8	29.5	70.0	51.5
1932	280.1	1,071.1	1,351.2	10.2	32.9	22.5
1933	249.3	1,006.4	1,255.7	9.1	30.9	20.9
1934	248.8	1,294.3	1,543.1	9.1	39.7	25.7
1935	478.8	1,365.8	1,844.5	17.4	41.9	30.7

¹ The contracts awarded in 1919 and 1920 represent 25 states. North and South Carolina are also included in the figures for the years 1921 to 1924 inclusive, making 27 the total number of states for these years. Beginning with 1925, 37 states are represented. Contracts awarded for 27 states in 1925 amounted to: residential, \$2,359.8 million; nonresidential, \$2,682.1 million; total, \$5,041.9 million.

Source: *Statistical Abstract of the United States*, 1931, p. 875; *ibid.*, 1935, p. 787. *Federal Reserve Bulletin*, February, 1936, p. 140.

TABLE II.—ALL BANKS IN THE UNITED STATES—LOANS, INVESTMENTS, AND DEPOSITS (EXCLUSIVE OF INTERBANK DEPOSITS) OF MEMBER AND NON-MEMBER BANKS
(In millions of dollars)

Year	Date	Loans	Index ¹	Investments	Index ¹	Deposits	Index ¹
1919	Jun. 30	24,723	76.2	11,847	83.8	33,603	75.0
1920	Jun. 30	30,829	95.0	10,845	76.4	37,721	84.2
	Dec. 29	30,655	94.5	10,896	77.1	³	
1921	Jun. 30	28,988	89.3	11,012	77.9	35,742	79.7
	Dec. 31	27,869	85.9	11,148	78.9	³	
1922	Jun. 30	27,750	85.5	12,206	86.4	37,615	83.9
	Dec. 29	28,880	89.0	13,039	92.3	³	
1923	Jun. 30	30,398	93.7	13,341	94.4	40,688	90.8
	Dec. 31	30,797	94.9	13,206	93.4	42,163	94.1
1924	Jun. 30	31,541	97.2	13,639	96.5	43,405	96.8
	Dec. 31	32,458	100.0	14,724	104.2	45,835	102.3
1925	Jun. 30	33,882	104.4	14,948	105.8	47,612	106.2
	Dec. 31	35,655	109.9	14,945	105.7	49,224	109.8
1926	Jun. 30	36,176	111.5	15,386	108.9	49,733	111.0
	Dec. 31	36,777	113.3	15,246	107.9	50,155	111.9
1927	Jun. 30	37,378	115.2	16,373	115.8	51,662	115.3
	Dec. 31	38,426	118.4	17,024	120.4	52,909	118.0
1928	Jun. 30	39,483	121.7	17,782	125.8	53,398	119.1
	Dec. 31	40,782	125.6	17,484	123.7	56,766	126.7
1929	Jun. 29	41,531	128.0	16,943	119.9	53,852	120.1
	Dec. 31	41,918	129.2	16,499	116.7	55,289	123.4
1930	Jun. 30	40,638	125.2	17,471	123.6	54,954	122.6
	Dec. 31	38,135	117.5	18,074	127.9	53,039	118.3
1931	Jun. 30	35,384	109.0	19,637	138.9	51,782	115.5
	Dec. 31	31,305	96.5	18,399	130.2	45,821	102.2
1932	Jun. 30	27,834	85.8	18,237	129.0	41,963	93.6
	Dec. 31	26,063	80.3	18,883	133.6	41,643	92.9
1933	Jun. 30	22,205	68.4	17,872	126.4	37,998	84.8
	Dec. 30	² 21,977	67.7	² 18,342	129.8	38,505	85.9
1934	Jun. 30	21,278	65.6	21,224	150.2	41,870	93.4
	Dec. 31	20,474	63.1	22,984	162.6	44,771	99.9
1935	Jun. 29	20,272	62.5	24,145	170.8	45,766	102.1

¹ 1923-1925 equals 100.

² Revised.

³ Not available.

Source: Federal Reserve Board, *Twentieth Annual Report*, pp. 161-163; *Twenty-first Annual Report*, pp. 140-141. *Federal Reserve Bulletin*, February, 1936, p. 92.

TABLE III.—INDIVIDUAL MONEY INCOMES AS SHOWN BY FEDERAL INCOME TAX RETURNS,
1922-1923

Year	Groups in thousands of dollars	Income			Wages and salaries			Dividends			All other property			Per cent of total income returned
		Number of returns	Total income returns (\$000 omitted)	Average income	Income from wages and salaries (\$000 omitted)	Per cent of total income returned	Income from dividends (\$000 omitted)	Per cent of total income returned	Income from all other property (\$000 omitted)	Per cent of total income returned	Income from all other property (\$000 omitted)	Per cent of total income returned	Income from all other property (\$000 omitted)	Per cent of total income returned
1922	All groups	6,787,481	24,871,908	3,664	100,0	13,693,993	55.06	\$2,664,219	10.71	\$ 8,513,696	34.23	100,00	100,00	
	Below 5	6,193,270	15,553,016	2,511	10,760,516	69.19	490,684	3.15	4,301,603	27.66	91,25	62.53		
	5-10	6,391,373	13,127,162	2,790	100,0	1,375,159	43.97	566,317	11.39	1,395,686	55.77	12,57	12,57	
	10-50	186,307	4,118,270	22,100	1,289,898	31.03	1,442,538	27.68	1,704,882	41.30	2,757	16.60		
	50 & above	16,031	2,063,460	128,710	100,0	277,397	13.44	674,538	32.69	1,111,925	53.87	.23	8.30	
1923	All groups	7,698,331	29,318,928	3,808	117.9	14,230,209	48.54	3,126,503	10.66	11,962,216	40.80	100,00	100,00	
	Below 5	7,072,444	19,312,014	2,731	11,069,212	57.32	683,000	3.91	5,558,503	39.14	91,87	65.87		
	5-10	397,630	3,183,408	8,001	101,8	1,410,310	44.30	146,049	10.87	1,427,000	44.30	51,17	10.86	
	10-50	216,633	3,032,099	14,422	73.9	1,453,381	47.62	1,183,997	38.76	1,415,721	13.62	2,74	10.41	
	50 & above	16,634	3,177,1407	226,730	182.8	297,276	7.88	913,588	24.27	2,560,543	67.90	.22	12.86	
1924	All groups	7,697,788	29,578,997	4,012	118.6	13,617,663	46.04	3,230,914	10.99	12,710,420	42.97	100,00	100,00	
	Below 5	6,672,650	18,168,236	2,723	116,8	10,216,749	55.74	634,043	3.44	7,407,444	40.97	90,54	61.42	
	5-10	437,330	3,500,580	8,004	111.9	1,521,771	43.47	292,105	8.34	1,636,704	55.93	11,83		
	10-50	238,277	2,505,055	21,286	116,1	1,644,714	31.60	2,097,731	23.24	3,205,610	56.33	3,23	17.60	
	50 & above	22,551	2,705,121	125,640	131.1	324,429	11.99	1,115,035	41.22	1,255,662	46.79	.30	9.15	
1925	All groups	4,171,051	25,272,935	6,059	101.6	9,742,160	38.55	3,464,625	13.71	12,065,249	47.74	100,00	100,00	
	Below 5	3,340,362	10,449,908	3,128	6,72	5,708,249	54.63	419,257	7.94	4,322,747	40.36	80,08	41.34	
	5-10	503,362	4,044,226	8,035	129.3	1,697,320	41.97	321,290	7.94	2,025,747	50.09	12,07	16.00	
	10-50	296,518	6,559,213	18,682	158.4	1,844,326	28.21	1,186,177	18.14	3,508,710	53.65	7,11	25.88	
	50 & above	30,518	4,243,492	139,050	492,255	11.60	1,557,901	36.24	2,213,491	52.16	.74	16.78		
1926	All groups	4,138,692	25,447,436	6,150	102.3	9,994,365	39.27	4,012,598	15.77	11,440,473	44.96	100,00	100,00	
	Below 5	3,243,224	10,079,477	3,108	64.8	5,630,700	55.87	430,228	4.27	4,018,727	39.92	78,37	39.61	
	5-10	560,549	4,491,074	8,012	143.6	1,884,562	41.97	435,309	7.94	2,170,789	48.34	13,55	17.65	
	10-50	304,214	2,155,674	21,516	158.6	2,055,135	31.40	1,482,060	22.64	3,007,479	45.96	7,35	25.72	
	50 & above	30,102	4,331,211	143,884	209,9	423,284	9.77	1,664,001	38.42	2,243,926	51.81	.73	17.02	

	All groups	4,101,547	26,208,560	6,390	105.4	10,218,450	39.00	4,254,829	16.28	11,735,281	44.77	100.00
1927	Below 5 ¹	3,187,950	9,948,576	3,121	144.5	5,634,174	57.24	492,919	4.95	3,761,483	37.81	37.96
	5-10	567,700	4,517,770	7,958	1,927	43,21	43.21	430,621	9.53	2,134,878	47.26	13.84
	10-50	312,202	6,735,228	21,573	163.1	2,005,314	29.77	1,314,473	22.49	3,215,441	47.74	25.70
	50 & above	33,695	5,006,986	148,597	242.7	566,691	11.31	1,816,816	36.29	2,623,479	52.40	19.10
	All groups	4,070,851	28,987,634	7,121	116.5	10,862,331	37.47	4,350,979	15.01	13,774,324	47.52	100.00
1928	Below 5 ¹	3,059,964	9,564,418	3,126	5,854,045	61.21	341,064	5.57	3,169,369	45.23	32.99	
	5-10	628,766	4,920,698	7,874	2,250,255	45.05	438,373	8.85	2,282,070	46.10	15.45	
	10-50	338,917	7,351,052	21,462	1,06,462	9.43	1,529,492	20.81	2,715,98	50.53	8.33	
	50 & above	43,184	7,121,466	164,910	345.1	671,369	2,042,050	2,407,847	61.90	1,05	24.57	
	All groups	4,044,327	29,946,952	7,405	120.4	11,198,979	37.40	4,786,028	15.98	13,961,945	46.62	100.00
1929	Below 5 ¹	3,012,256	10,236,784	3,398	65.8	6,019,938	58.81	538,997	5.27	3,667,849	35.92	34.18
	5-10	658,019	5,243,756	7,969	167.7	2,494,992	45.86	506,118	9.65	3,322,646	44.49	17.10
	10-50	335,143	7,416,900	22,131	179.6	2,050,997	28.19	1,666,781	22.47	3,559,722	49.34	24.77
	50 & above	38,889	7,049,512	181,273	341.6	683,352	2,074,152	29.42	4,292,128	60.89	.96	
	All groups	3,707,599	22,412,446	6,045	90.4	9,921,352	44.27	4,197,304	18.73	8,293,190	37.79	100.00
1930	Below 5 ¹	2,897,078	9,205,629	3,178	59.2	5,514,456	59.90	488,648	5.31	3,202,635	34.79	78.14
	5-10	550,977	4,513,555	8,192	2,233,256	49.48	573,156	12.70	1,707,143	37.82	14,86	20.14
	10-50	239,607	5,447,832	22,903	132.9	1,768,163	32.33	1,582,081	28.83	2,137,588	6.46	24.49
	50 & above	19,847	205,430	161,507	155.3	406,187	12.67	1,553,419	48.46	2,245,824	38.87	14.30
	All groups	3,225,924	17,268,451	5,353	69.4	8,325,162	48.21	3,113,861	18.03	5,829,428	33.76	100.00
1931	Below 5 ¹	2,355,193	8,245,659	3,133	5,035,134	60.62	530,187	6.42	2,715,58	32.96	81,69	47.81
	5-10	411,655	3,502,761	8,387	112.0	1,810,521	51.69	485,755	13.87	2,206,657	34.44	12,95
	10-50	162,062	3,745,932	23,114	1,25,713	33.79	1,128,915	30.14	1,351,304	36.07	5.02	
	50 & above	11,014	1,762,889	160,059	85.4	243,376	13.83	969,004	54.97	550,009	31.20	.34
	All groups	3,877,430	14,392,080	3,712	57.9	8,136,717	56.54	1,972,133	13.70	4,283,230	29.76	100.00
1932	Below 5 ¹	3,520,988	9,022,434	2,562	58.6	6,079,462	67.38	1,431,508	4.78	2,511,464	27.94	90,81
	5-10	251,014	2,144,170	8,542	1,16,306	51.02	1,18,765	14.87	1,688,680	32.11	6,44	62,69
	10-50	97,690	2,255,056	22,879	54.1	759,754	33.99	659,577	29.51	819,831	36.50	2,32
	50 & above	7,738	950,220	127,968	47.9	160,575	16.63	562,285	56.78	263,255	26.59	.20
	All groups	3,723,558	13,393,825	3,597	53.9	7,390,356	55.18	1,559,046	11.64	4,444,423	33.18	100.00
1933	Below 5 ¹	3,391,666	8,286,286	2,443	53.3	5,551,709	67.00	359,180	4.33	2,375,397	28.67	61,87
	5-10	229,754	1,925,356	8,380	61.6	977,034	50.75	712,065	12.07	715,906	37.18	14,37
	10-50	94,066	2,125,022	22,591	51.5	712,065	31.54	512,144	24.10	900,213	42.36	2,53
	50 & above	8,072	1,057,162	130,966	51.2	148,946	14.09	455,243	45.06	452,973	42.85	.22

¹ Based upon samples.² Total income before deductions.Source: United States Treasury Department, *Statistics of Income* (1922-1933).

TABLE IV.—CORPORATION INCOMES
(Values in millions of dollars)

Year	Number of returns (000 omitted)	Depre- ciation and deple- tion	Other tax (not income)	Com- piled ¹ net profit	Income tax	Income ⁴ after taxes	Dividends paid	
							Cash	Stock
1921	356	2,573	1,473	1,156	702 ³	454	5	5
1922	383	2,889	1,518	5,967	784 ³	5,183	3,437	3,348
1923	399	3,116	1,635	7,634	937	6,697	4,169	891
1924	417	3,187	1,670	6,795	882	5,913	4,339	511
1925	430	3,330	2	9,316	1,170	8,146	5,189	544
1926	455	3,841	1,878	9,510	1,230	8,280	5,945	758
1927	475	3,848	2,014	8,669	1,131	7,538	6,423	703
1928	496	4,112	2,203	10,737	1,184	9,553	7,074	550
1929	509	4,430	2,222	11,870	1,193	10,677	8,356	1,289
1930	519	4,449	2,297	4,659	712	3,947	8,202	414
1931	516	4,270	2,231	777 ⁶	399	1,176 ⁶	6,151	164
1932	509	3,940	2,087	3,829 ⁶	286	4,115 ⁶	3,886	143
1933	504	3,742	2,124	930 ⁶	423 ³	1,353 ⁶	3,127	102

¹ Compiled receipts less statutory deductions.

² Not shown separately; included in miscellaneous deductions not appearing in this table.

³ Includes war and excess-profits tax.

⁴ Compiled net profit less income tax.

⁵ Not available.

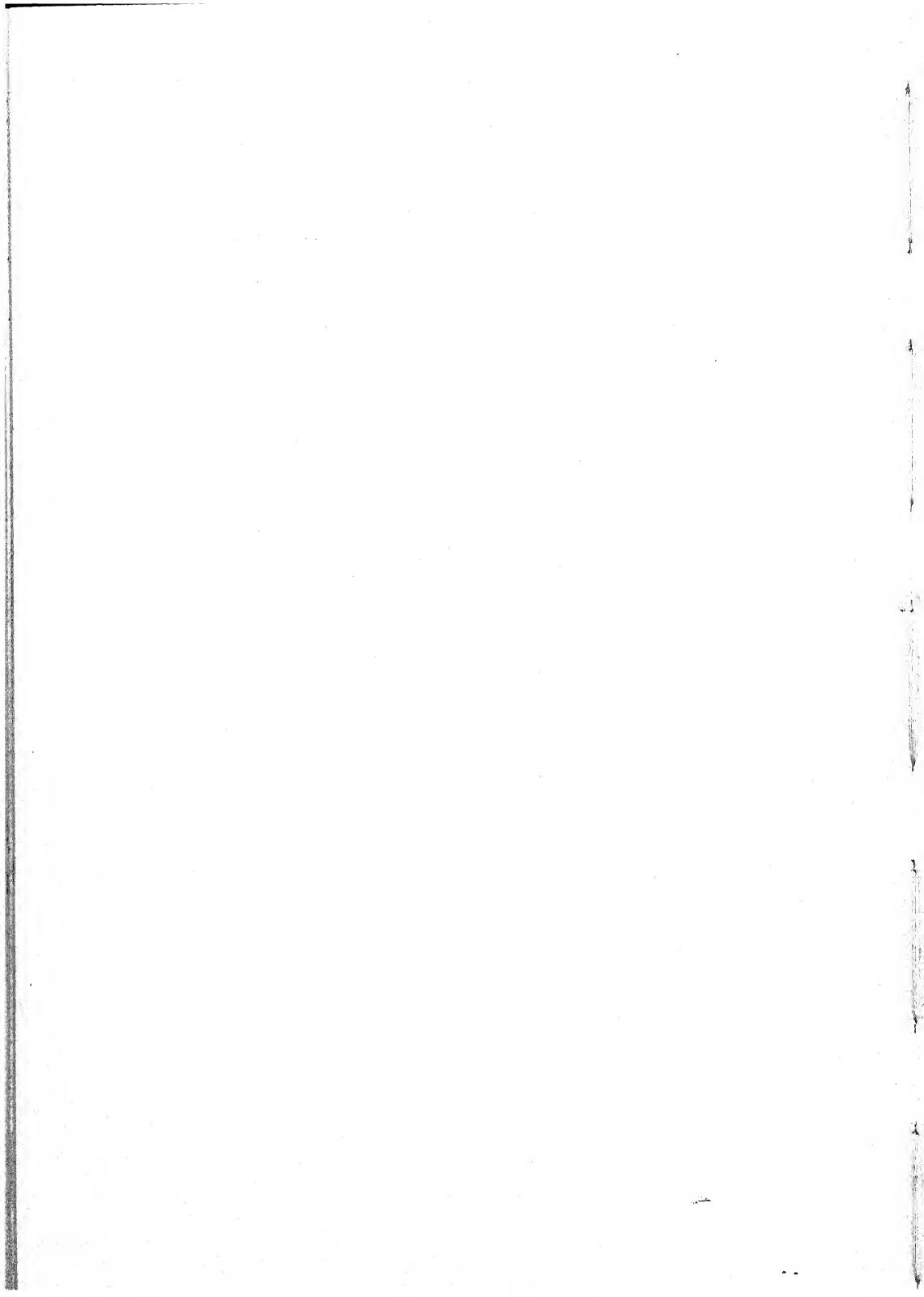
⁶ Deficit.

Source: *Statistical Abstract of the United States; Corporation Income Tax Returns, 1934*, p. 180. *Statistics of Income for 1932*, p. 28; *ibid.*, 1933, p. 28.

TABLE V.—CAPITAL ISSUES
(In millions of dollars)

Year	Corporate issues			Corporate and government		
	Total	New	Refunding	Total	Refunding	Foreign government
1919	2,740	2,303	436	4,286	698	440
1920	2,966	2,710	256	4,010	375	291
1921	2,391	1,823	568	4,204	627	379
1922	3,073	2,336	737	5,236	931	431
1923	3,233	2,702	530	4,990	685	243
1924	3,839	3,322	516	6,352	759	778
1925	4,738	4,100	637	7,118	902	645
1926	5,300	4,357	943	7,430	1,086	514
1927	7,319	5,391	1,928	9,934	2,143	777
1928	7,818	6,080	1,738	9,992	1,877	651
1929	10,026	8,639	1,387	11,592	1,409	68
1930	5,473	4,944	529	7,676	638	482
1931	2,589	1,763	825	4,023	907	
1932	643	325	318	1,730	538	
1933	382	161	221	1,054	344	
1934	491	178	313	2,212	826	
1935	2,267	404	1,864	4,747	3,271	10

Source: *Commercial and Financial Chronicle*; Vol. 118, p. 363, January 26, 1924; Vol. 122, p. 410, January 23, 1926; Vol. 132, p. 383, January 17, 1931; Vol. 142, p. 193, January 11, 1936.



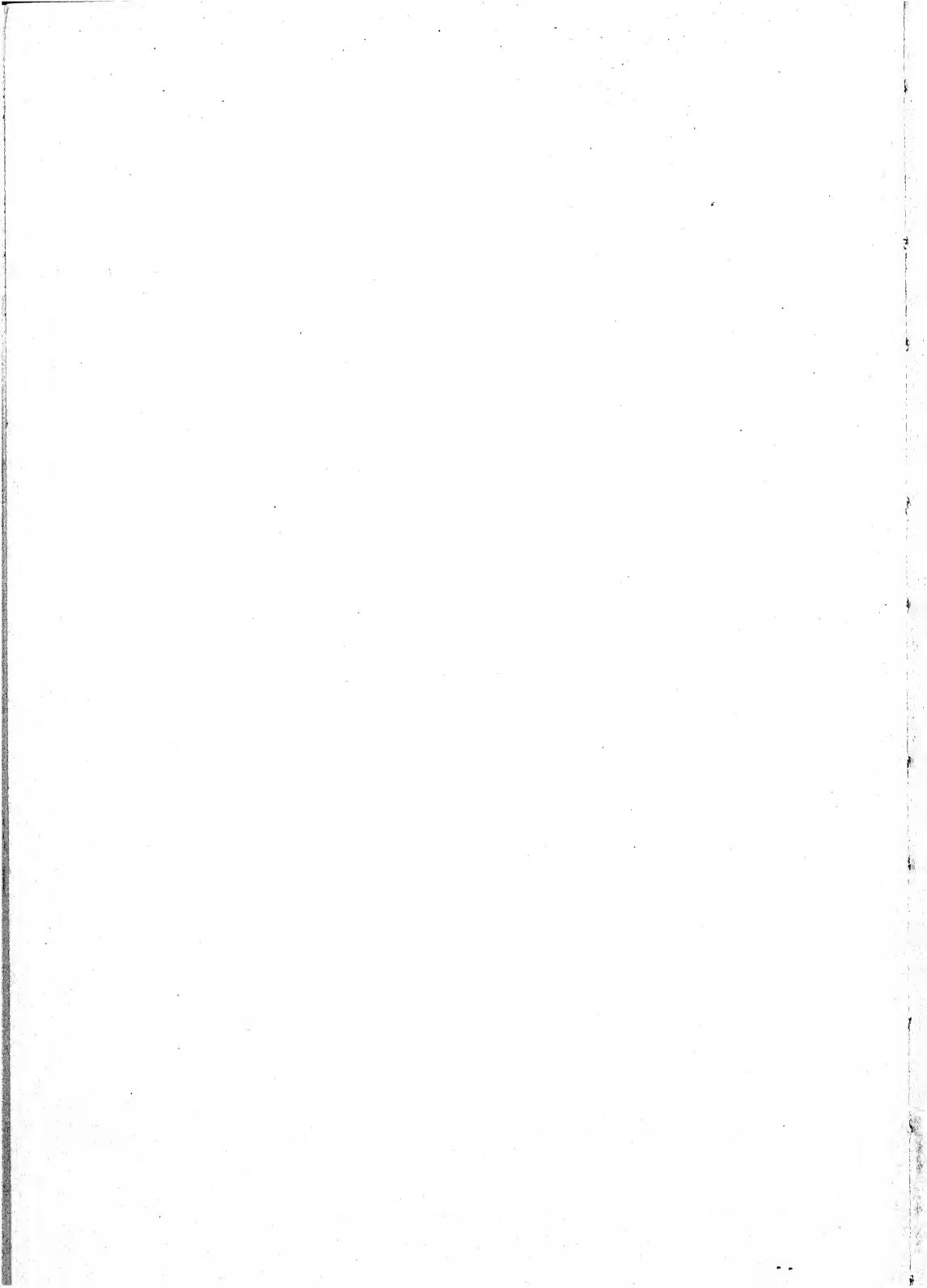
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Index

A

Adams, Arthur B., 134*n.*, 185*n.*, 187-188, 217
Agricultural Adjustment Act, 255
Agricultural industry, peculiarities of, 153

B

Babson chart, 246
Babson statistical organization, 245-246
Bank credit, contraction of, 33-34
expansion of, 33-34, 88, 177
government control of, 198-199
inflation of, 178-179
reasons for extensive use of, 6, 174
relations to booms, 87, 101-102
war demand for, 180
Bank reserves, as related to trend of business, 256
Banking, statistics of, 72-74
Banking Act of 1933, 208
Basic trend factors, quantitative measurement of, 249-253
Beveridge, W. H., 228*n.*
Boom conditions, 106-107
Boom crashes, 122-128
Boom-generating forces, 174-180
changes in industries, 91-92
development of new industries, 90-91
exploitation of resources, 90
industrial forces, 86-93
nonindustrial forces, 93-106
other generating forces, 93-101
settlement of new territories, 89-90
Boom-terminating forces, exhaustion of
bank credit, 121-122
increasing stocks of goods, 119-121
rising cost of production, 115-117

Boom-terminating forces, rising output of consumers' goods, 117-119
Booms, characteristics of, 41-45
cumulative development of, 101-107
declining power of, 169-171
excess savings during, 109-113
origin and cumulation of, 86-107
related to monetary policies, 94-97
termination of, 115-122
Bouniatian, Mintor, 240*n.*
Brookmire Economic Service, The, 248
Bureau of Labor Statistics, 254
Business, conditions of, 13
Business activity, composite index of, 66-67
Business conditions, present, factors leading up to, 259-260
retarding policies of, 261
Business-cycle theories, early, 39
modern, survey of, 218-241
Business cycles, beginning and ending of, 65
changes in, 65-66
classes of, 43
definition of, 16
differences in, 64-65
efforts to eliminate, 188
magnitude and intensity of, 65
of the past, 53-59
phases of, 16-17, 45-53
similarities in, 64-65
types of, 38-59
Business enterprises, control of, 5
definition of, 2
financing, 6
function of, 7
object of, 4
Business fluctuations, causes of, 196, 221-222
cures for, 196

Business fluctuations, differences in
 concepts of, 224-225
 nature of, 38-45
 practices which tend to eliminate, 189
Business movements, statistical analyses of (1915-1929), 76-85
Business stability, 18-37
Business stabilization, 188-195
Business statistics, sources and nature of, 68-76
Business trend, as related to forecasting, 242
Businessmen, functions of, 3-4

C

Capital, accumulation of, 5, 24
Capital demand theories, 234-241
Capital equipment, replacement during depressions, 162-163
Capital goods, fluctuations in demand for, 234-238
 sale of, 30
Capital investments, excess, 145
 results of, 251
Capital shortage in United States, 131
Capitalism, socialism, fundamental distinction, 1
Capitalist system, 218
Cassel Gustav, 237n.
Catchings, Waddill, 240n.
Combinations, monopolistic, 134-135
Commercial banks, conditions of, 73-74
 groups of, 72
 reserves held by, 73
Commercial and Financial Chronicle, 76
Competition, 7-8
Competitive theory of profits, 182
Conflicting forces, 9
Cooperation between business and government, 194-195
Coordinating forces, 7-9
Corporate securities, 201
Corporate surpluses, 112-113
Credit (*see* Bank credit)
Crises, characteristics of, 41-47
 cumulative movement of, 127-128
 decline in production during, 127

Crises, deflation of credit during, 126
 liquidation during, 125
 losses during, 126-127
 price declines during, 124
 recovery legislation during, 123
 of 1720, in England and France, 54
 of the 18th century, 54
 of the 19th century, 54-57
 from 1900 to date, 57-59
Currency policy, government control of, 197-198
CWA, 208
Cyclical fluctuations, 42
Cyclical movements, 61
Cyclical theories, bases for, 218-225

D

Demand for goods, causes for increase in, 86-87
Depression of 1929, 180
Depressions, causes of, 39
 changes and adjustments during, 152-161
 characteristics of, 41, 48, 52, 152-160
 influence of wars on, 159-160
 magnitude of, 155-157
 of 1929-1933, 83-84
 relations to government regulation, 211
Division of income, statistics on, 74-75

E

Economic balance, upsetting forces of, 108-115
Economic classes, 4
Economic system, features of, 1-6
 nature of, 1-17
Economic welfare, 67
Engels, Frederick, 40
English depression of the 20's, 148-149
English dole system, 149
Excess of consumption over production during depressions, 160
Exchange, medium of, 2

Exchange economy, theories of, 226-233
 nature of, 226-229

Exchange-economy theorists, 226-229

F

Federal reserve banks, 72-73
Federal Reserve Board, 253-254
Federal Reserve System, 199
FERA, 208
Fisher, Irving, 196-197, 230n., 231n.
Fluctuations, business (*see* Business fluctuations)
 cyclical (*see* Cyclical fluctuations)
 quantitative measurements of, 60-85
 random, 61-62
Forecast, author's, 261-263
Forecasting, accuracy of, 243
 bases for, 242-249
 weaknesses of, 248
Forecasting agencies, 245-248
Forecasting business conditions, 242-263
Forecasting methods, 243
Forecasting procedure, practical, 256-263
Foreign trade, 29-30
Foster, W. T., 240n.
Freedom of contract, institutions of, 1
Future forecasting, necessary prerequisites to, 256-258

G

Gold certificates, as related to purchasing power, 95, 99
Government expenditure program, 100
Government expenditures, control of, 178-179
Government regulation, as related to stabilization, 211-217
Government stimulation recovery policy, 203-211
Governmental policies, to aid business, 205
 to regulate business, 205
Governmental regulatory policies, proposed, 212

H

Harvard Economic Service, The, 246-247

Hawtrey, R. G., 231n.

Hobson, J. A., 239n., 240n.

I

Income distribution, statistics on, 254-255

Income distribution forces, changes in, 180-188

Incomes (*see* Money income)

Increased demand for goods, forces working toward, 162-163
 causes of, 103-106

Industrial balance, adjustments necessary to establish, 187-188

 relation of foreign trade to, 146-147
 World War, 148

Industrial leaders, attitude of, 149-150

Industrial stability, 18-37

Industrial system, stabilizing forces, 31-37

 of United States, 129-136
 development of, 130-136
 growing maturity of, 129-136
 operation after 1876, 133
 upsetting forces, 31-37

Inflation of price level (*see* Price level)

Inflation booms, initiation of, 249

Inflation-deflation cycles, characteristics of, 43-50

Interest rates (1900 to 1929), 185-186

Inventions, application of, 132

Investments, capital (*see* Capital investments)

 causes of decline in the 20ties, 142-143

K

Keynes, J. M., 240n.

King, W. I., 74n.

L

Labor, competitive power of, 132

Lescure, Jean, 228n.

M

Machine production, growth of, 38
 Management of enterprises, 134
 Mitchell, W. C., 228n.
 Monetary policies, government control of, 197-198
 as related to booms, 94-97
 Money, chief functions of, 20
 circulation of, 20
 kinds of, 21
 uses of, 21-22, 30
 Money and credit, variations in quantity of, 229-233
 Money and credit theories, 226-233
 advocates of, 231
 regulation of, 230
 weaknesses of, 232-233
 Money income, definition of, 22
 distribution of, 74n., 254-255
 in 1876, 132
 division of, 182
 effect on price level, 201
 increase in, 163
 inequality in distribution of, 134-135,
 171-172, 180, 238
 purposed regulatory policies, 214
 relation to consumers' goods, 129
 relation to net production, 25-26
 relation to physical net product, 129
 relation to producers' goods, 129
 Monopolistic combinations (*see* Combinations, monopolistic)
 Monopolization of industry, effects on profits, 191
 Monopoly, 11
 Moody's Investors' Service, 248

N

National Banking Act, 1935, 212
 National Economic Security (*see* Adams, Arthur B.)
 National Emergency Banking Act, 208
 National Industrial Recovery Act, 191
 National money income (*see* Money income)
 NRA, 191, 193, 194, 208

National Social Security Act, 189, 254-255
 Net product, production of, 18-20
 Net product value, 19-20
 Net production (*see* Net product)
 New Deal measures, 207
 New industries, changes in, 176
 establishment of, 175
 future expansion of, 175
 Nonboom business depressions, 129-151
 generation of, 137-144
 progress of, 150

O

Opportunities for profits, 249
 Overinvestment-underconsumption cycle, 43-44, 51-53
 Oversaving, 129-130
 Oversaving-underconsumption depression, causes of, 200
 prevention of, 200

P

Panic, definition of, 47
 Patents, government regulation of, 213
 Peacetime inflationary booms, creation of, 177
 Persons, W. M., 231n.
 Pigou, A. C., 228n.
 Present business conditions (*see* Business conditions, present)
 Price adjustments during depressions, 153-154
 Price indices, 71
 Price level, artificial inflation of, 208-209
 decreasing, 14, 28
 government control of, 196-203
 increasing, 14
 Primary causal forces in cyclical movements, classification of, 225
 Private property, institutions of, 1
 Production, excess capacity of, 129
 factors of, 3, 22
 mechanization of, 5-6

Profit-margin-determining forces, changes in, 219
 Profit margins, variations in, 219-221
 Profit opportunities, development forces creating, 174
 Profit rates, 186
 Profits, basic factors of, 13 causes for increase in, 182 theory of, 182
 Protective tariff laws, 205
 Public expenditures, control of, 179
 Public Utility Act (1935), 201-202
 PWA, 208

Q

Questions concerning cycles, 17

R

Recession of 1924-1927, 80-81
 Reconstruction Finance Corporation, 199
 Recoveries, characteristics of, 160-173 future, 171-173 relations to succeeding trends, 167-173
 Recovery forces, 162-164 limitation of, 165-167
 Recovery measures, business, 207
 Recovery policies, government, stimulation of, 203-211
 Relative market demand, 219n.
 Rentals and royalty payments, 186
 Restraints of trade, 204
 Robertson, D. H., 237n.
 Roosevelt monetary policy, 1933, 32

S

Sales, statistics on current volume of, 253-254
 Savings, as related to investments, 28 as related to money income, 28 statistics on, 75-76 during the 20's, 141-142 during war booms, 141

Say's "Law of the Markets," 9, 223
 Seasonal variations, 61
 Secular trend, 61
 Securities, corporate (*see* Corporate securities) financial structure of, 202-203 issuance of, 202-203
 Securities Act 1933, 201-202, 212
 Self-regulation of industry, objections to, 192
 Self-interest, 7
 Silver Act 1887, 1890, 32
 Silver certificates, as related to purchasing power, 95, 99
 Smith, Adam, 203
 Socialism, capitalism, fundamental distinction, 1
 Spending and saving, during depressions, 160-161 ratio between, 114
 Spiethoff, Arthur, 237n.
 Stable price level, 200
 Stabilization, business (*see* Business stabilization) governmental policies of, 196-217
 Stabilized industrial system, features of, 25-31
 Standard Trade and Securities Service, The, 248
 Statistical data, inadequacy of, 189 in measurements, uses of, 60-67
 Statistical methods, 60-62
 Statistics, limitation of uses, 62-63 on savings, 75-76
 Stimulation activities of the government, 205-206
 Stock Exchange Act (1934), 201-202, 212
 Stocks of goods, replacement during depressions, 162

T

Technological improvements, 183
 Theorists, classes of, 222-223
 Time series, limitations of, 64 movements of, 60-61

Tougan-Baranowsky, M., 237*n.*

Trend of business, downswings in, 252

 factors of, 15

 meaning of, 12-17

 temporary upswings in, 252

V

Value harmonies during depressions,
 reestablishing of, 157-158

Volume of trade, index of, 69-70

W

U

Underconsumption recessions, 144-151

Unequal distribution theories, 234-241

 exponents of, 240

Upsetting forces and business stabiliza-
 tion, 174-195

Wage adjustments during depressions,
 154-155

Wages, 184-185

Warren, George F., 231*n.*

Wealth, concentration of, 133-136, 181

Why booms end in crashes, 108-128

World War boom, 76